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USSR Report

AGRICULTURE

No. 1339



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MAJOR CROP PROGRESS AND WEATHER REPORTING

ORENBURGSKAYA OBLAST GRAIN CROP SOWING OPERATIONS

Moscow SEL'SKAYA ZHIZN' in Russian 20 May 82 p 1

/Article by I. Gavrilenko, Orenburgskaya Oblast: "Concern for the Quality of the Grain"/

/Excerpts/ Warm winds are blowing throughout Orenburgskaya Oblast. The farmers are somewhat slow in carrying out their field work -- the land is drying out and requires moisture which was accumulated during the autumn and winter months. This is why use is being made of every valuable moment of time on the farms, as every effort is made to shorten the sowing periods.

In Ilek'skiy Rayon, for example, almost 48 complexes went out onto the fields at the same time.

The situation is somewhat different in other rayons of the oblast -- the sowing units are only now joining in the work. And here maximum importance is being attached to carrying out each agricultural measure thoroughly, taking into account the peculiarities of the spring and fields. Such a course is dictated by the commencement of development of the zonal system of farming, which is opening up extensive prospects for creative endeavors. The farmers intend first of all to raise the quality of the grain being supplied to the state by expanding the plantings of first grade wheats.

The machine operators at the Sovkhoz imeni Elektrozavod also recognize the value of durum wheats. There have been a number of years during which the farm received bonuses amounting to 500,000 rubles for having supplied high quality Khar'kovskaya-46 grain. Its cropping power has been higher than that of other crops. Thus, whereas the average annual yield per hectare for all grain crops during the Tenth Five-Year Plan was 16.8 quintals, for Khar'kovskaya-46 it was 20 quintals or more. The workers at the Elektrozavod are also displaying concern for this wheat this spring. They believe that their moisture supplies are fully adequate, but must be utilized in a thrifty manner. They are fertilizing the soil well during sowing and the quality of the seed in terms of its preparation is even better than that at the Sovkhoz imeni Popov. One half of the areas being set aside for durum wheat is being sown using seed of the first reproduction and the other half -- elite seed.

By way of assisting the sowings of Khar'kovskaya sowings, the oblast's grain growers have commenced introducing new varieties of durum wheats, including Orenburgskaya-2. Its seed will be planted this year on arable land mainly in the

northern part of the oblast and in rayons which since olden times have produced durum wheats -- Abdulinskiy, Matveyevskiy and some others. The plans call for an expansion of the sowings of valuable wheats in the eastern virgin land zone. Over the past 3 years, fine yields of Khar'kovskaya-46 have been achieved by the farms in Kvarkenskiy Rayon, particularly the Kul'minskiy Sovkhoz. The farms in the neighboring Adamovskiy Rayon are growing this variety on almost 10,000 hectares. The remaining tracts have been assigned for strong wheat. In all, more than 2.3 million hectares, or almost one half of the oblast's grain crop fields have been set aside for these and other varieties.

This spring, 2,500 teams have commenced operating on the basis of a single order.

Day and night the roar of motors continues unabated in the Orenburg Steppe region. The sowing of grain crops is now being carried out on the fifth million hectares. Simultaneously with their sowing work, the farmers have commenced making preparations for the busy harvest season.

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CSO: 1824/385

MAJOR CROP PROGRESS AND WEATHER REPORTING

IMPROVED CROPPING POWER, QUALITY OF GRAIN IN OMSKAYA OBLAST

Moscow SEL'SKAYA ZHIZN' in Russian 28 May 82 p 1

/Article by M. Sil'vanovich, Omskaya Oblast: "Taking Field Conditions Into Account"7

/Text7 The Omsk farmers are commencing their field campaign to obtain high quality grain. In the process, a great amount of attention is being given to the predecessor arrangements for wheat. Indeed the predecessor crops provide the foundation for the quality of the grain in any of the oblast's four soil-climatic zones, especially in the steppe and southern forest-steppe regions, where mainly strong grain is produced. Owing to the introduction of zonal agricultural complexes developed by SibNIISKhoz /Siberian Scientific Research Institute of Agriculture/ during the five-year period in the steppe zone, for example, 62 percent of the arable land was treated as fallow (in Russko-Polyanskiy Rayon 79 and in Odesskiy Rayon -- 67 percent), of which 55 percent was strip fallow, which promotes more efficient repair of the fields.

This year, 70 percent of the wheat will be planted following the best predecessor arrangements: fallow, a second crop following fallow, following a bed of perennial grasses, following pulse crops and so forth.

It bears mentioning that the farmers in the Irtysh River region underwent a stern test last autumn and this present spring. The fields entered the winter with a supply of productive moisture of from 40 to 80 millimeters in the 1-meter soil layer. In order to eliminate the deficit in moisture, the farms successfully carried out winter agricultural measures. Prior to the commencement of sowing operations in Russko-Polyanskiy Rayon there were 135 millimeters of moisture on the fallow land and 100-110 on sweep plowed autumn land.

The sowing work was carried out very thoroughly in Pavlogradskiy Rayon. The total amount of positive temperatures in April and May exceeded by twofold the average established over a period of many years and this posed the threat of irreplaceable losses of moisture. Thus the machine operators carried out the entire cycle of early spring work in conformity with the scientific recommendations: extensive use of BIG-3 harrows with subsequent packing of the soil and thereafter the use of all available means for combating weeds.

A difficult pre-sowing period is recalled for a long period of time. But it bears mentioning that the sowing machines in all areas were moved out onto fields that were free of weeds. The agronomists, the leaders of teams and brigades and the people's controllers concentrated their attention on ensuring that the seed was not planted in a dry layer of soil -- the most possible type of waste this year and one which must be avoided using all means.

More and more use is being made on the Omsk land of the flow line technology for sowing, wherein the entire cycle of work -- from pre-sowing tilling of the soil to the sowing work itself -- lasts for only a minimal amount of time. In neighboring Tyumenskaya Oblast, such a "flow line" has already undergone a check over a period of many years at the OPKh /experimental model farm/ Zavodoukovskoye of Zaural-NIISKhoz and in Uporovskiy Rayon, where 30-50 quintals of grain per hectare are not being obtained.

There is still another farming factor which tends to ensure a high yield and growth in the quality of the grain -- the selection of the best sowing periods. In the southern part of the oblast, the mass sowing operations usually commence when the northern zone has already completed this work. Such has been the situation this year. The farms in Tevrizskiy, Tarskiy, Ust'-Ishimskiy and Sedel'nikovskiy Rayons were the first to plant their wheat. The "peak" sowing period for Pavlogradskiy, Novovarshavskiy, Odesskiy and other rayons occurred at the end of the second and the beginning of the third decades in May. And commencing with the very first day, a high output was achieved by each sowing unit. The best grain rayon, Russko-Polyanskiy Rayon, at first lagged behind its neighbors, but then by the second and third days of the mass sowing work it had sown 17,000-18,000 hectares, having organized around-the-clock operation of the units.

In recent years, with noticeable successes being achieved in the breeding of local wheats, the Omsk grain growers have been afforded an opportunity to augment their scientifically sound agricultural practices with the selection of new varieties. Thus the oblast began the Tenth Five-Year Plan by sowing new grain crop varieties on an area of 176,700 hectares and by 1981 this figure had increased to 1.42 million hectares. The new varieties of wheat alone will be grown on 1.22 million hectares, including strong and durum varieties on 1.12 million hectares.

At the present time, with the spring sowing operations coming to a close, other organizational-economic factors are coming into play throughout the oblast with regard to raising the quality of the grain -- laboratories for the intra-farm analysis of wheat are being re-equipped and the plans for interaction between the farms and the grain receiving enterprises are being defined more precisely.

This year the oblast's farmers intend to sell a considerable quantity of grain to the state. Inspired by the decisions of the May (1982) Plenum of the CC CPSU, they are doing everything possible to ensure fulfillment of their plans from both a quality and quantity standpoint.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

BRIEFS

ASHKHABAD GRAIN HARVEST DIFFICULTIES--In our republic, considerable importance is attached to not supplying grain that is overripe, especially barley, and also to preventing it from shattering from full-weight ears. This explains why rather rigid schedules are established for the combine operators: seven working days are set aside for harvesting the barley and 10 working days for the wheat. Initiative has been displayed. Controlled threshing has furnished up to 20 quintals of barley grain per hectare. This has become the norm for each combine operator. But judging from all events, it will not be easy to maintain this norm. Even the start of the harvest operations was complicated by driving rainfall and hail. Lodged stalks and downed and empty ears out on the fields serve as reminders of these events. Thus it is not easy to harvest such grain with minimal losses. Once again the harvest operations require a high level of professional expertise on the part of the grain growers. Nevertheless the personnel are striving to harvest all of the crops down to the last grain in the interest of increasing the food and forage supplies. The Ashkhabad workers are prepared for the difficulties. Each combine is equipped with special devices for raising and harvesting the lodged grain plants. The more experienced machine operators have been assigned to the most difficult tracts. At the Kolkhoz imeni Sverdlov, for example, Bally Siliyev was one of the first to harvest barley which had lodged owing to driving rainfall. Despite the harvesting difficulties, combine operators M. Mamedgel'dyyev and A. Orazov at the 40 Let TSSR Kolkhoz and others succeeded in over-fulfilling their norm to a considerable degree. The grain of the new harvest is being brought in. One did not have to wait long for a song to break out. In the evening one echoed over the settlement of a grain growing brigade at the Sotsializm Kolkhoz where a komsomol-youth wedding was in progress. /by Yu. Betkalov/ /Excerpt/ /Ashkhabad TURKMENSKAYA ISKRA in Russian 26 May 82 p 1/ 7026

TURKMEN GRAIN HARVEST--Turkmen SSR--The farmers in the Turkmen SSR are experiencing a tense period at the present time. Many farms, after harvesting their barley, have now commenced bringing in their wheat. Hot weather prevails: during the day the temperature reaches 40° in the shade. Haste is required. Indeed, even a slight delay and the ears will not hold the grain. Thus the machine operators are striving to harvest their crops as rapidly as possible. And the crops are good. Immediately following the grain growers in Ashkhabadskiy Rayon, the machine operators in Turkmen-Kalinskiy Rayon in Maryyskaya Oblast commenced their wheat harvest. In Ashkhabadskaya Oblast, where wheat occupies large areas, 40 trucks have been brought in from neighboring oblasts for transporting the crop. Various enterprises and organizations have furnished assistance to the farmers in the form of equipment for use during the busy harvest period. One hundred and fifty eight

harvesting-transport complexes and detachments have been created. A great amount of concern is being displayed in Turkmenia regarding fulfillment of the urgent tasks assigned during the May (1982) Plenum of the CC CPSU. Much is being done to improve the return from investments and the final results of the branch. Each farm is undertaking measures aimed at preventing crop losses during the harvest work. The hermetic sealing of the motor vehicles was carried out and the country roads repaired. Cleanliness and order prevail at the receiving points: no grain is allowed to fall under the wheels of the trucks. Nevertheless, interruptions in operations are still occurring. In some areas the harvesting production line is "slipping." The preparations for work in Chardzhouskaya Oblast were prolonged unjustifiably. As a result, the harvest rates here were lower than those for neighboring oblasts. Grain transport operations have not yet been properly organized in Ashkhabadskaya Oblast. Only 70 percent of the combines are in use out on the republic's fields. The enterprises of Sel'khoztekhnika are at fault in this regard. The low quality of equipment repair work has led to frequent breakdowns and extended periods of equipment idle time. Quite often the motor vehicle drivers lose time awaiting their turns at refueling points. A "green light" must be given for the harvest operations. This year the republic's farmers have great opportunities at their disposal for making a worthy contribution towards carrying out the food program and supplying the country's granaries with a greater quantity of grain. /by A. Grachev/ /Excerpts/ /Moscow PRAVDA in Russian 9 Jun 82 p 1/ 7026

UZBEK GRAIN HARVEST--Uzbek SSR--With each passing day, more and more Uzbekistan farms are joining in the harvest campaign. Inspired by the decisions handed down during the May (1982) Plenum of the CC CPSU, the farmers are striving to harvest the grain rapidly and without losses. The machine operators in Surkhandar'inskaya Oblast have led the socialist competition since the very beginning of the busy harvest period. The grain crops have been harvested from more than half of the areas in its zone of irrigation. Here there are many combine operators who, against a norm calling for 8 hectares, are cutting down grain crops from 10 or more hectares each day. Practically all of the irrigated arable land occupied by barley and wheat will be sown this year in corn and this will furnish 1,000 additional tons of grain. "The grain growers are seized by a great desire" stated the 1st secretary of the Surkhandar'inskaya Oblast Party Committee A. Karimov, "to celebrate the year of the May Plenum of the CC CPSU with great labor accomplishments. The kolkhozes and sovkhoses have great opportunities at their disposal in this regard. Each irrigated hectare is furnishing high grain yields. Forty five quintals of grain per hectare are being obtained in Kumkurganskiy and Leninyul'skiy Rayons and 50 quintals in Gagarinskiy Rayon. The initial thousands of tons of grain have been delivered to the receiving points. The tempo of the harvest work in neighboring Kashkadar'inskaya Oblast is increasing. Compared to 3 days ago when 650 combines were operating out on the fields, today -- approximately 1,000. Their output is increasing. The grain growers are devoting special attention to the quality of the harvest work. Grain mowing operations are commencing in Namanganskaya, Andizhanskaya and Ferganskaya Oblasts. The farmers are striving to obtain as much output as possible from each irrigated hectare. Following the harvesting of the grain crops in all areas, the fields are being sown in corn and this will provide silage bulk and grain in the southern rayons. In addition to harvesting each ear, the grain growers also wish to guard against straw losses. At the Ulus Sovkhoz in Samarkandskaya Oblast, it is being supplied to the karakul raising farms in bales. Neighboring farms are following the example set by this collective. The machine

operators are hastening to harvest completely and protect all of the crops grown. /by N. Gladkov/ /Excerpts/ /Moscow PRAVDA in Russian 13 Jun 82 p 1/ 7026

GRAIN SALES TO STATE--Ashkhabad--The grain growers of Turkmenistan have commenced selling grain to the state. Barley obtained from the new harvest in Maryyskaya and Ashkhabadskaya Oblasts has been delivered to the receiving points. On many farms, the harvest is greater than that of last year. This year in Turkmenistan, winter grain crops must be harvested from an area of 85,000 hectares of land. The farmers have also commenced harvesting their principal crop -- wheat. /Text/ /Moscow TRUD in Russian 3 Jun 82 p 1/ 7026

SECONDARY SOWING OF CORN--Termez--The grain growers of Gagarinskiy Rayon in Surkhandar'inskaya Oblast have achieved a fine harvest of grain crops. They have completed their harvest work and have obtained an average of 46 quintals of wheat from each hectare of irrigated land. At the present time, the plowing units are following in the wake of the combines. They are preparing the soil for secondary sowings of corn. The seed and fertilizers have been made available. The plans call for the sowing work to be completed during the first 10 days in June, so as to ensure a high corn yield -- no less than 100 quintals of grain per hectare. /Excerpts/ /Moscow PRAVDA in Russian 7 Jun 82 p 1/ 7026

BARLEY HARVEST COMPLETED--Ashkhabad--Yesterday the grain growers of Turkmenistan completed their barley harvest. Many kolkhozes and sovkhoses required no more than 1 week in which to carry out this work. /Text/ /Moscow TRUD in Russian 11 Jun 82 p 1/ 7026

MASS THRESHING WORK COMMENCES--Osh--Yesterday the farmers in the southern part of the Kirghiz SSR commenced their mass threshing of wheat and barley. The machine operators and procurement specialists made fine preparations for the busy harvest season. /Text/ /Moscow TRUD in Russian 11 Jun 82 p 1/ 7026

ALTAY FIELD WORK--Barnaul, 13 Apr--The tractor units have been moved out onto the fields in the largest grain area in Altayskiy Kray -- the Kulundinskaya Steppe region. The machine operators are carrying out the selective harrowing of the soil and applying mineral fertilizer top dressings to their winter crops and perennial grasses. The Altay farmers must sow grain, groats and forage crops on almost 6 million hectares of fields. The grain growers have vowed to carry out the sowing work during the best periods and in a high-quality manner. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 14 Apr 82 p 1/ 7026

HIGH PLOWING RATES--Barnaul, 13 May--The sunny spring period has arrived in the Altay region. The machine operators in the eastern and piedmont regions, where the land "ripens" earlier than in the Kulundinskaya Steppe region, are taking advantage of this fact. Today the kolkhozes and sovkhoses in 45 rayons commenced their mass sowing of grain and groats crops. The Siberian weather allows only a few days in which to carry out the field work. This is why the farmers on many farms have resolved to complete the spring sowing work in just 100 hours. The large-group utilization of equipment, the development of the vehicle and unit movement routes in advance and the work of mechanized brigades and teams in behalf of one order have all served to promote high sowing rates. More than 1,000 mechanized complexes are carrying out sowing work in the kray and making extensive use of the Ipatovo method. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 14 May 82 p 1/ 7026

WEED CONTROL WORK--Khabarovsk--The far eastern aviators are furnishing active assistance to the farmers in carrying out their weed control work. /Text/ /Moscow TRUD in Russian 11 Jun 82 p 1/ 7026

SPRING WHEAT SOWING COMPLETED--Barnaul, 1 Jun--Today the Altay farmers completed sowing their principal grain crop -- spring wheat. All of the work was carried out during the best agrotechnical periods. This was promoted to a large degree by the large-group utilization of equipment, by well-thought out movement routes for the vehicles and units and by the introduction of a new form for organizing labor -- non-schedule brigades and teams with wages based upon the final results. Approximately 1,570 sowing complexes operated out on the grain fields using the watch method. Each day they sowed 250,000-300,000 hectares of arable land. So as not to lose moisture, the machine operators did not allow a pause to take place between the soil preparation work and the sowing. Special attention was given to the quality of the work. The farmers constantly monitored the sowing norms, the seed placement depth and the applications of fertilizer. The campaign to achieve high quality was reinforced by additional measures: all of the kolkhozes and sovkhoses participated in the kray competition for high quality work. Based upon the example of grain growers in Blagoveshchenskiy Rayon, group work booklets with tear-off coupons for quality were instituted on the farms. For violations of the agricultural practices, the coupons could be withdrawn and this would affect the amount of bonuses to be issued. Efficient work was performed by all spheres of services and by the dispatcher communications on the farms and in the rayons. Approximately 2,000 temporary party and party-komsomol groups carried out organizational and political-educational work on a daily basis out on the fields. The sowing of millet, buckwheat continues out on the Altay fields and the tending of the crops has commenced. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 2 Jun 82 p 1/ 7026

NEW WHEAT VARIETIES--Kurgan--The mass sowing of wheat is unfolding on all farms throughout the oblast. The sowing rates are higher than those for last year. The machine operators are striving first of all to plant intensive grain varieties of Novosibirsk and Kurgan selection out on the fields. Although these varieties have a longer growing season, their yields under local conditions are higher. This year the new varieties will be planted on two thirds of the wheat fields in the Trans-Urals region. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 19 May 82 p 1/ 7026

ACCELERATED SOWING OF PEAS--Isetskoye (Tyumenskaya Oblast)--The flow-line method has clearly proved its worth during the organization of spring work out on the spring crop fields. The Siberian workers have employed it successfully for the accelerated sowing of peas. At the present time, there are 11 complexes in operation on farms throughout the rayon. Each one of them is capable of carrying out all of the work on a high agrotechnical level, commencing with cultivation of the soil and ending with the sowing of seed and packing of the soil. This is making it possible for the farmers to sow pulse crops on almost 1,000 hectares daily. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 19 May 82 p 1/ 7026

INDUSTRIAL TECHNOLOGY EMPLOYED--Kuybyshev--The oblast's farms have completed sowing their early grain crops. Despite the prolonged cold weather and frequent rainfall, the sowing campaign was carried out in an organized manner and on a rapid basis. At the same time, the sowing of sugar beets and sunflowers has been completed. On a large portion of the areas, the cultivation of these crops is being carried out using the industrial technology. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 19 May 82 p 1/ 7026

A SUMMER SNOWFALL--Chelyabinsk--The roofs of homes covered by snow -- a unique summer phenomenon even in the Urals region. Such was the scene which greeted the residents of Chelyabinsk yesterday. Accompanied by strong gusts of wind, wet snow fell during the night bringing down many trees. The municipal services are engaged in removing branches and downed trees from the streets and sidewalks. A TASS correspondent has been informed by the oblast's hydrometeorology laboratory that a series of cyclones passed through the southern Urals region bringing with it an abundance of rainfall. In some rayons, the amount of this rainfall reached the monthly norm in just a day's time. And on the evening of 4 June this rainfall was joined by cold air sweeping in from the north and it was this combination that brought about the wet snowfall. The snow cover thawed in a matter of several hours, since the air temperature never dropped below zero degrees. The agricultural workers were pleased to receive this inclement weather. This year the sowing work here has been carried out during the best agrotechnical periods and the abundant moisture arrived just in time. [Text] [Moscow TRUD in Russian 6 Jun 82 p 4] 7026

SNOW RETENTION WORK--Stavropol'--In addition to providing an additional supply of moisture, the snow cover on the winter crop fields also serves as reliable protection against frosts. In the interest of covering their grain fields with a white "blanket," the machine operators on the Stavropol' farms yesterday commenced their snow retention operations. Until recently, the weather in the kray in no way resembled winter conditions. Following the new year celebrations, the grass began turning green in sunny areas and blossoms were even noted. The first snowstorms came to Stavropol'skiy Kray simultaneously with a sharp cold snap. In order to conserve the snow out on the fields, the grain growers erected snow fences made of straw and reeds out in exposed areas. At a number of kolkhozes and sovkhoses the snow cover is being packed down using tractor units with rollers. Such agrotechnical measures are not disrupting the root systems of the autumn seedlings. Snowplows are being used on the arable lands on which spring crops will appear in the spring. [Text] [Moscow GUDOK in Russian 12 Jan 82 p 1] 7026

IMPROVED GRAIN QUALITY--Stavropol', 5 June--Large ears of a reddish tint -- a characteristic sign of especially valuable strong wheat. A top dressing of nitrogen fertilizers applied to the crops during the period of blossoming and early ripening is aiding the farmers in raising the quality of their grain. The kolkhozes and sovkhoses in the steppe regions of Stavropol'skiy Kray have commenced carrying out this important agro-technical method. (The May (1982) Plenum of the CC CPSU had as one of its goals that of achieving stable growth in the gross yields of wheat of a raised baking quality. The obligation undertaken by the Stavropol' farmers -- to supply the state granaries this year with no less than one million tons of strong and valuable varieties of grain -- in excess of three times more than the amount obtained at the beginning of the previous five-year plan. The strength of the wheat is raised by a number of other agricultural measures. Thus a large portion of the most valuable land -- fallow tracts -- has been set aside this year throughout the kray for the planting of this wheat. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 6 Jun 82 p 1] 7026

KUBAN' RICE CROP--Krasnodarskiy Kray--All of the farms in Krasnoarmeyskiy Rayon, which has the largest rice fields in the kray at its disposal -- 58,000 hectares -- are carrying out their work out on the check plots in a more rapid and more organized manner than was the case last year. At the Kolkhoz imeni Kirov, use is being made of machines for pouring seed into the sowing machines, which were made from combines that had been written off. All of the units here have been equipped with such machines and this has brought about a sharp reduction in technological idle time. The tractors and motor vehicles thus released, are being employed for other operations. At this same farm and also at neighboring ones, use is being

made of a locally designed unit for crushing fertilizer and pouring it into fertilizer hoppers. This present spring period out on the rice check plots can quite properly be referred to as a spring devoted to achieving high quality work. Having visited farms in Krasnoarmeyskiy, Slavyanskiy, Temryukskiy and other rayons, I became convinced thoroughly regarding the diligent manner in which the machine operators are carrying out each operation. The restoration of crop rotation plans having 2-3 fields of alfalfa or green manure tracts, now being completed on each rice growing farm, will ensure a greater return. The use of organic fertilizers has been increased and the land reclamation status of irrigated lands has been improved. Those irrigation specialists and the collectives of teams which initiated a competition to obtain a higher yield serve as fine examples of a thrifty attitude being displayed towards the use of irrigated land. Hundreds of rice growers are competing this year to achieve the goal of 75-100 quintals of rice per hectare and almost one half of the check plots have been assigned to their care. This year the rice sowings in the Kuban' occupy 182,000 hectares. The sowing rates are increasing with each passing day and the flooding of the check plots continues. The kray's rice growers are competing to carry out the obligations undertaken for this year -- to obtain 51-52 quintals of rice from each hectare and to sell 590,000 tons of rice to the country. /by Yu. Semenenko/ /Excerpts/ /Moscow SEL'SKAYA ZHIZN' in Russian 14 May 82 p 1/ 7026

EFFICIENT WEATHER REPORTING--Krasnodar--Agrometeorological stations are being organized at kolkhozes and sovkhoses throughout the Kuban' for the purpose of assisting farmers in diminishing the effects of inclement weather on the crops. Such a weather service is already in operation at more than 500 farms, including brigades and detachments. The information being obtained is being processed by rural meteorological stations of the USSR Hydrometeorological Service -- there are 31 such stations in the kray. Today the farm leaders and specialists are obtaining operational data on air temperature, the total amount of precipitation and on soil temperature at the tillering node depth of the plants. /Text/ /Moscow GUDOK in Russian 4 Apr 82 p 1/ 7026

HARVEST PREPARATIONS--Krasnodar, 27 May--The wonderful Kuban' wheat is beginning to bloom. The time will soon be at hand for harvesting the winter grain crops. Equipment inspections for harvest readiness commenced today at kolkhozes and sovkhoses throughout the kray. Approximately 20,000 combines and almost 15,000 harvesters are concentrated in the machine yards. More than 25,000 trucks are in good operating condition. All of the equipment is concentrated in harvesting-transport detachments and teams. This year the grain crops out on the fields will not have high stalks. The working plans of the harvesting collectives call for the use of both two-stage harvesting and direct combine operations, with mandatory controlled threshings. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian 28 May 82 p 1/ 7026

ARMENIAN SOWING PLANS--Spring agricultural operations are nearing completion out on the public fields. Of 184,107 hectares called for, sowing has been carried out on 163,813. The planned tasks for the sowing of grain and pulse crops (less corn) have been fulfilled and over-fulfilled -- 56,800 hectares have been sown instead of 55,500. Special attention has been given this year to the sowing of pulse crops by types. Compared to 377 hectares last year, the sowings of beans, chick peas and lentils have been increased this year to 661 hectares. Sugar beets have been sown on 3,982 hectares, annual grasses -- on 44,800 (instead of 43,000 as called for)

and pure sowings of perennial grasses -- on 7,600 hectares. Compared to last year's 20,200 hectares, an undersowing of perennial grasses has been carried out on 35,700 hectares, including a pure sowing and undersowing of clover on almost 10,000 hectares. All of this is the result of selfless and painstaking labor by the farmers and machine operators. However, in some rayons and on some farms the indicators are considerably lower than the average for the republic. For example, as of today only 65 percent of the spring sowing work has been carried out in Aparanskiy Rayon. It is worth mentioning that in Aragatsskiy Rayon, which is subjected to the same natural climatic conditions, the sowing work is almost completed. Yekhegnadzorskiy Rayon has fulfilled its sowing task by 57 percent, whereas in neighboring Azizbekovski Rayon this indicator is 95 percent. The sowing rates for corn are lagging behind considerably throughout the republic. Up until now, only 50 percent of the task has been carried out. In particular, Aniyskiy, Gorisskiy, Artashatskiy, Ararat'skiy, Masig'skiy, Spitak'skiy and Shamshadin'skiy Rayons are lagging behind. /Excerpts/ /Yerevan KOMMUNIST in Russian 30 May 82 p 3/ 7026

GRAIN SOWING COMMENCES--The sowing of grain crops has commenced in the mountainous regions of Armenia, where the republic's principal fields are concentrated. /Text/ /Moscow EKONOMICHESKAYA GAZETA in Russian No 19, May 82 p 4/ 7026

RICE SOWING COMMENCES--Astrakhan, 11 May--The farmers at the specialized Kommunar Sovkhoz were the first in Kamyzyak'skiy Rayon to commence sowing their rice. The machine operators of the Yubileynyy and Travinskiy Sovkhoz and other Kamyzyak'skiy Rayon farms have moved their sowing units out onto the check plots. The farmers in Kharabalinskiy Rayon are carrying out their rice sowing work at a high tempo. For the busy period of spring work out on the oblast's farms, 47 sowing complexes consisting of 330 specialized teams have been created and have commenced work out on the check plots. Approximately 750 units are engaged in preparing the soil and carrying out the sowing work. This valuable groat crop must be planted on almost 48,000 hectares in just 15 working days. /by A. Golovko/ /Excerpts/ /Moscow SEL'SKAYA ZHIZN' in Russian 12 May 82 p 1/ 7026

GEORGIAN GRAIN PLAN--Signakhi, Georgian SSR--The grain growers in the Alazani River Valley, who have raised a fine crop, are presently engaged in harvesting their grain crops. Distinct from previous years, the harvest strategy for this year is very clear: using the large-group method of unit operation, the decision has been made to harvest the grain using the two-stage method on the principal sowing areas and to complete the harvesting work within 10-12 calendar days. Efforts are underway in all areas to prevent losses. The combines which have been moved out onto the fields have been hermetically sealed and staffed with sufficient personnel for double-shift operations. People's control posts are responsible for adjusting the machines and ensuring that no grain is lost along the route. The early harvest has made it possible to introduce corrections into the plans of the farms. The plowing tractors included in the structure of the harvesting detachments are immediately preparing the soil for the new sowing: the plans call for corn to be planted on the fields for the purpose of obtaining a second harvest. The farmers of Georgia, inspired by the decisions handed down during the May (1982) Plenum of the CC CPSU, have vowed to obtain no less than 30 quintals of grain from each hectare. /Text/ /Moscow PRAVDA in Russian 7 Jun 82 p 1/ 7026

NEW ROSSIYANKA WHEAT VARIETY--Chelyabinsk, 14 May--Rossiyanka wheat, created by the plant breeders of the Yuzhnoural'sk Scientific Research Institute of Farming, has appeared for the very first time on the oblast's fields this spring. In connection with the mass sowing of grain crops which has commenced today throughout the oblast, 54,000 hectares of fields have been set aside for this crop. Such attention for this new variety is by no means accidental. Rossiyanka wheat has produced 50 quintals of grain per hectare on experimental plots. This year the new varieties of intensive type grain and pulse crops will be grown on an area that is one and a half times larger than that of last year. /Text/ /Moscow SEL'SKAYA ZHIZN' in Russian
15 May 82 p 1/ 7026

NEW ROSSIYANKA RYE VARIETY--Leningrad--A new variety of winter rye, known as Rossiyanka, was developed by scientists at the All-Union Scientific Research Institute of Field Crop Husbandry imeni N.I. Vavilova, where the largest collection of plant samples in the world is located. As a rule, new varieties of grasses are created over a period of decades. However, Rossiyanka came to life in just 2 years. Its development involved the use of a new technical method for cross pollination, developed by Doctor of Biological Sciences V. Kobylanskiy. As a result of this method, the country's plant breeders have been provided with still another opportunity for controlling the hereditary properties of plants. Several new grain crop varieties -- Malysh, Poltava and others -- have already been developed using the method of V. Kobylanskiy. Tests carried out at an experimental station in the city of Pushkino have confirmed the high breeding qualities of Rossiyanka, particularly its resistance against inclement northern weather. Agronomists on farms in Leningrad Oblast, for example the Dal'naya Polyana Sovkhoz in Volkhovskiy Rayon, have passed along fine comments regarding the new rye. /Text/ /Moscow NEDEL'YA in Russian No 19, 10-16 May 82 p 4/ 7026

CSO: 1824/385

LIVESTOCK FEED PROCUREMENT

LATVIAN FEED PRODUCTION GOALS

Conference Notes Problems

Riga SOVETSKAYA LATVIYA in Russian 5 Jun 82 p 1

/Article: "High Tempo and Quality for Feed Procurements"/

/Text/ A meeting of the republic's feed procurement staff was held in Riga on 3 June. A maximum amount of attention was given to those problems concerned with the rates and quality of the green harvest operations and the tending of the crops. These vital problems were examined in light of the tasks assigned to our republic by the food program for the USSR, as adopted by the party for the period up to 1990. During this present five-year period, the workers in the Latvian rural areas must raise the average annual production of meat (in dressed weight) to 300,000-310,000 tons and to 340,000-345,000 tons during the Twelfth Five-Year Plan, milk -- to 1.8-1.9 and 1.9-2 million tons respectively. Grain must be increased to 2-2.1 million tons and 2.1-2.3 million tons. The production of all types of feed must be increased by a factor of 1.3-1.4.

Speeches were delivered during the meeting by the republic's deputy minister of agriculture Ya.R. Ayzpurvs, the director of the Latvian Scientific Research Institute of Farming and Agricultural Economics V.G. Stroganov and by other economic executives.

The speakers noted that this year the farms must procure no less than 515,000 tons of hay, 1.1 million tons of haylage, 1.4 million tons of silage, 812,000 tons of food roots and 219,500 tons of grass meal and chop.

In analyzing the course of preparations for the hay harvesting season and the rates for carrying out the feed procurement work throughout the republic, the speakers commented upon the obvious improvements achieved, compared to last year, in the quality of the equipment preparation work and in the more efficient commencement by the farms of the green harvest campaign. By 2 June, all of the rayons of Latvia had commenced procuring their grass meal and chop and 12 rayons had commenced their hay procurement work. But it was pointed out at the same time that there are many farms, especially in Valkskiy, Dobel'skiy, Kuldigskiy, Limbazhskiy and Tsesisskiy Rayons, which are late in starting up their grass meal preparation units. As yet, by no means have all of the kolkhozes and sovkhoses whose lands were already "prepared" for mowing operations actually commenced cutting down their grasses for

hay, despite the fact that the weather has been excellent for carrying out this work. Mowing work around pastures is being delayed in Valkskiy, Valmiyerskiy, Ventspilsskiy, Rezeknenskiy, Talsinskiy and Tukumskiy Rayons.

Special attention was given to the quality of the feed procurement work which, as was emphasized, is greatly dependent not only upon thorough observance of the technology but also upon the time at which the mowing work is carried out. Indeed, each day's delay beyond the optimum periods results in considerable nutrient losses and, in addition, eliminates the possibility of obtaining aftergrowth. Those problems concerned with organizing control over the quality of the feed being procured and timely harvesting operations were examined in detail. Emphasis was placed upon the importance of organizing around-the-clock operation of the grass meal preparation units, the thrifty and proper use of oil and lubricating materials and upon the efficient repair of equipment.

As noted during the meeting, a most important task of the professional trade union organizations is that of launching an effective socialist competition for shortening the feed procurement periods, raising the quality of the feed and constantly displaying concern for publicizing the competition and the active participation in it of all labor collectives and each worker.

Serious attention should be given to the complete use of all available feed procurement equipment and to personnel placement problems. At each kolkhoz and sovkhov, careful thought must be given to organizing the work of student production brigades and work and relaxation detachments for senior class students. They must be attracted to assisting in carrying out weed control work in sugar beet and food root plantings and participating in other feed procurement operations within the limits of their capabilities.

The speakers gave serious attention to the status of affairs with regard to tending the crops. It was noted that for the republic as a whole the schedules for thinning out the root crops are being dragged out. Here the farms in Valmiyerskiy, Kraslavskiy, Limbazhskiy and Talsinskiy Rayons are lagging behind more so than farms in other rayons. In a number of rayons the work out on the potato and beet plantations is unfolding very slowly.

As yet, the potential for raising the cropping power of forage crops by means of artificial irrigation is being utilized to only a negligible degree. The agricultural workers must view as a common task the need for procuring adequate quantities of all types of feed and ensuring that it is all of high quality. Depending upon the need, all able-bodied workers at kolkhozes and sovkhovs must be motivated to participating in the field work. Nor should the supporting organizations be allowed to remain idle on the sidelines.

During the staff meeting, its chief, secretary of the Central Committee of the Communist Party of Latvia V.A. Chemm, gave a detailed analysis of the tasks confronting the republic's agricultural workers.

Progress Indicated, Recommendations Offered

Riga SOVETSKAYA LATVIYA in Russian 2 Jun 82 p 1

/Article: "Sufficient Feed for the Farms"/

/Text/ Summer has arrived. At the present time, a great complex of agrotechnical and organizational measures must be carried out in agriculture in order to ensure that each kolkhoz and sovkhos obtains the planned yields and that the obligations undertaken in connection with the production of field crop husbandry and livestock products are fulfilled.

The May (1982) Plenum of the CC CPSU defined the creation of a strong feed base for livestock production as being one of the paramount measures for carrying out the food program. This year the farms in our republic must increase their production of all types of feed by no less than a factor of 1.5. The chief concern at the present time, based upon the extensive use of scientific recommendations and leading experience and the introduction of progressive technologies, is that of commencing the haying operations in a timely manner and ensuring the fulfillment and over-fulfillment of the planned volumes for procuring high quality coarse and succulent feed.

The procurement of artificially dehydrated feed has commenced in a majority of the republic's rayons. One third of the units employed for producing grass meal are in operation in Bauskiy, Rizhskiy and Daugavpilsskiy Rayons. The work front is expanding with each passing day.

This year the logistical base for feed production has been strengthened noticeably. An increase has taken place on the farms in the number of good storehouses available for the storing of haylage, hay, silage and food roots. The size of the machine-tractor pool has been increased with the addition of new equipment. All of this is making it possible to accelerate the harvesting of the grasses, to carry out this work during the best periods and more rapidly than earlier and, it follows, to lay away more high quality feed. There is one requirement: the machines assigned for mowing and harvesting the grasses must be utilized in a skilful and highly productive manner.

While increasing in every possible way the procurement of coarse and succulent feeds, it will be necessary also to constantly display concern for raising their quality. The livestock ration will be considered to be of full-value only when the animals are supplied with ample quantities of protein, vitamins and other food elements. This is why it is necessary to observe in a strict manner the rules governing the procurement and storage of forage.

A most important technological element in feed production is that of accurate observance of the harvesting periods for all crops. Appropriate recommendations have been developed for this purpose by the republic's Ministry of Agriculture. Perennial grasses, for example, should be mown during the best periods and within 10-15 days. For leguminous grasses -- from the onset of the budding phase to the commencement of blossoming and for cereal grasses -- from the heading phase to the commencement of blossoming. The farm specialists should be reminded in a firm manner that each day of delay in carrying out the harvest work, following the optimum periods, leads to cereal grass losses on the order of 18 to 25 kilograms per hectare and in the case of clovers -- up to 40-50 kilograms of protein. High quality artificially dehydrated feeds can be obtained from cereal grasses only

during the phase from stem growth to the commencement of blossoming. Each day of delay tends to bring about a reduction in the carotene content.

The selection of the technology at each farm must be determined based upon specific conditions and yet the goal is the same -- good quality feed. Importance is attached to retaining the value of the raw material in the forage and to obtaining 1st class feed.

Hay is considered to be one of the best types of feed. In order to obtain fine quality hay and avoid losses in dry substance, the scientists recommend that the duration of the sun-drying work be held to a minimum. It has been established that overall field losses in dry substance for a 24 hour period amount to 6 percent and for a 3-day period -- more than 16 percent. Fine experience has been accumulated on farms in Tsesisskiy Rayon -- here the hay is dried under a polyethylene film. Forced ventilation should be employed more extensively and all barns should be used for this purpose. It is mandatory that salt be used.

The republic's farms are procuring large amounts of haylage. But it is not of high quality in all areas. The principal reason for this -- violation of the technology employed for preparing it. It must be remembered that good haylage is obtained only with rapid sun-drying out of the fodder and its correct tamping down.

Silage is the principal type of succulent feed. And its quality is dependent upon the storehouse being filled rapidly and upon thorough tamping down and hermetic sealing of the bulk placed in storage. A considerable expansion is required this year in the use of preservatives for preserving the sugar and protein in the silage.

The production of artificially dehydrated feed makes it possible to increase the grass harvest in feed units by a factor of 1.5-2, compared to a procurement of hay left to dry out on a field. But this feed is not cheap and thus it is justified only if its quality is no lower than grades I through III.

Food roots are being grown in all areas this year. However, these crops are not being tended properly in all areas. The time is now at hand for thinning out the crops and this work must be carried out rapidly and in a fine manner.

The haying campaign is a busy period. The annual conditions require that the grasses be harvested rapidly, so as to make a second cutting possible. An object of special concern for all specialists attached to farms, rayon agroindustrial associations, party organizations and all agricultural workers must be that of organizing efficient control over the quality of the feed. Samples of the forage procured must be selected on a regular basis, in the interest of being able to introduce the required changes into the preparation technology on a timely basis.

In the interest of intensifying the material interest of workers engaged in feed procurement work, achieving high quality feed and shortening the harvesting periods, it is recommended that the lump wage payment system be employed on an extensive scale in addition to the piece-rate wage system. Under the lump wage payment system, the price for a ton of procured hay, haylage, silage or meal includes a principal payment for the volume of work performed, an additional payment for the quality of the feed and a raised payment for the work periods for procuring the feed.

The directors of sovkhozes and other state agricultural enterprises are authorized to issue (free of charge), in the form of an additional payment to workers engaged in feed procurement work and to sell in accordance with the planned production costs to permanent workers maintaining their own livestock, up to 10 percent of the hay, silage, food roots procured and 20 percent of the straw and also to issue free of charge up to 50 percent of the hay to workers engaged in mowing hay manually on unsuitable lands.

The Soviet people have warmly approved the decisions handed down during the May (1982) Plenum of the CC CPSU and the report delivered during it by Comrade L.I. Brezhnev. A high level of political and labor enthusiasm prevails in all areas. And it is the responsibility of the communists, under these conditions, to tirelessly carry out organizational and ideological-educational work among the population, to influence the consciousness and sensibilities of people, to direct their energies towards the successful fulfillment of the food program and to increase responsibility for all assigned tasks.

The local party, soviet and agricultural organs and the farm leaders and specialists must launch an extensive competition and make efficient use of the assistance furnished by city-dwellers, in order to ensure that the haying campaign is carried out during the best periods and greater quantities of high quality feed are obtained.

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CSO: 1824/378

LIVESTOCK FEED PROCUREMENT

INTENSIFYING KIRGHIZ FEED YIELDS

Quality Enhancement

Frunze SOVETSKAYA KIRGIZIYA in Russian 8 Jun 82 p 1

/Article/ by V. Li, professor, doctor of Biological sciences and deputy general director of the Kirghiz Scientific Research Institute of Livestock Production and Veterinary Science; T. Solov'yeva, candidate of agricultural sciences and head of a department; A. Sakimbayev, candidate of agricultural sciences and head of a department: "Full-Value Feed for the Farms"/

/Text/ As emphasized during the May (1982) Plenum of the CC CPSU, the food program must produce its initial results this year. In the interest of further raising the productivity of livestock production, special importance will be attached this summer to procuring an adequate quantity of feed. And since the dry spring period inflicted considerable damage on the natural fields, it follows that more complete use must be made of irrigated plantings of forage crops, with a greater return being obtained from each hectare. The principal reserve for increasing the production of hay, haylage, vitamin grass meal and so forth is that of intensifying the cultivation and harvesting of perennial grasses, which make it possible to obtain not only a large amount of feed bulk but also maximum nutrients per unit of space. The leading farms have been assigned the task of obtaining 1-2 additional cuttings through the use of good agricultural practices.

The experience of experts in obtaining high yields reveals that it is possible during the growing season to obtain 5-6 cuttings of alfalfa in the southern regions and in the Chu and Talas river valleys and to obtain 600-700 quintals of fodder or 8,000-9,000 feed units from each hectare and up to 2 tons of digestible protein. The grass should ideally be harvested at a young age -- at the end of budding and prior to blossoming of the leguminous plants, at which time they have a high nutritional value. A reduction in the harvesting periods coupled with good agricultural practices constitutes one reserve for increasing the perennial grass yields. In order to lower nutrient losses, use must be made of such progressive methods as drying by means of forced ventilation and the production of haylage, grass meal, granules and briquettes.

During the past few years, some farms have engaged in the practice of obtaining minced hay. Under this method the mown hay is sun-dried in a windrow to a moisture content of 20-25 percent, after which it is picked up, minced and delivered to the stacking areas. Such processes as shocking, transporting the shocks to the ricks

and mincing the hay when preparing for feeding operations during the autumn and winter period are completely eliminated when procuring minced hay. The volume of minced hay is two times less than that of unminced hay. This method for procuring hay ensures the best nutrient retention in the hay, protein by 10-20 percent and carotene by a factor of 2-3.

Hay procurements using the method of pressing makes it possible to shorten the harvesting periods, lower labor expenditures and raise the nutritional value of the hay. Here the mechanical losses are reduced by 50 percent.

The production of haylage is also effective. It lowers nutrient losses by 10-12 percent. The technology must be followed in a very strict manner in order to obtain full-value haylage. The majority of the farms adhere very strictly to the recommendations handed down by the scientists. As a result, they annually obtain full-value feed. However, there have been many instances of the trenches being filled for extended periods of time and with the grass not being adequately dried out or minced. This brings about a sharp reduction in the quality of the silage. This year it will be necessary to suppress all instances of even slight oversimplifications and also to increase the responsibility of the farm leaders and specialists with regard to ensuring that the technological requirements are observed.

When procuring haylage during rainy weather, difficulties arise in connection with the sun-drying out of the grasses. In such instances, every attempt should be made to sun-dry the grass to a moisture content of 65-70 percent, to add 15-20 percent hay or straw to this bulk and to ensure that everything is well mixed. Use can also be made of chemical preservation of weakly sun-dried grasses. Compared to conventional ensiling, the nutrient yield from 1 ton of bulk when use is made of chemical preservatives increases by 20-25 feed units and compared to a harvest of hay -- by 40-50 feed units. The use of chemical preparations is especially effective when preserving plants which are difficult to ensile.

During chemical preservation, the development of putrefactive, oil-acid and other undesirable microorganisms is halted, while the vital activity of lactic acid bacteria is for all practical purposes not suppressed.

One of the most effective dry preparations is that of sodium pyrosulphite. It is added to a ton of fodder at the rate of 4-5 kilograms. The uniform distribution of the preservative is a chief condition for correct preservation. Fine results are obtained from the use of formic and benzoic acids in the amount of 3-4 kilograms per ton of fodder.

An effective method for preparing valuable protein and vitamin feed from green grass is that of procuring vitamin meal by means of artificial drying out using modern drying units. With artificial dehydration, the nutritional value of the plant feed is retained more completely than when use is made of any of the other well known preservation methods.

All of the drying units available on the farms must be used fully throughout the 180-200 day summer period for the production of vitamin meal, so that as much green feed as possible can be processed using this progressive method. During the autumn period, when the crops subject to be processed into meal have already been utilized, a good raw material for preparing such meal is the haulm of sugar beets.

One progressive method for procuring feed is that of non-threshing harvesting of barley during the milky-waxy and waxy ripeness of the grain, for preparing granules from whole plants. This makes it possible to release fields for secondary sowings of post-harvest corn 20-25 days earlier and on areas having a sub-cover of alfalfa to obtain two cuttings during the second half of the summer, assuming good tending of the crop. The use of non-threshing harvesting of barley at the Sokulukskiy Experimental Farm made it possible to obtain an average of 82 quintals of granules per hectare and on the areas thus made available to obtain 306 quintals of post-harvest corn for feeding to the cows during the autumn period. This method made it possible to obtain 10,000 feed units and 750 kilograms of digestible protein from a hectare of arable land.

The use for cow feeding purposes of granules made from whole barley plants made it possible to replace up to 25 percent of the concentrates in the rations, to raise the milk yields and, during the fattening of young bulls, to obtain more than a kilogram of daily weight increase with a very limited expenditure of concentrates.

Extensive use must be made of granulated feeds on the republic's farms, especially for sheep. This makes it possible to preserve better the nutrients found in the feed, it facilitates their transporting and it reduces losses during the feeding process.

In the face of a shortage of raw materials for procuring coarse feed, use can be made of common reeds and rameal feed. For procuring rameal feed and producing vitamin meal and other products, use should be made of the shoots and branches of coniferous and deciduous trees, the thickness of which is not more than 1 centimeter. Good use can be made for this purpose of the shoots of birch, aspen, poplar, linden, pear and willow trees. However, the shoots of oak, cherry and walnut trees are not suitable for this purpose.

Cut branches with their leaves should be spread out for preliminary drying for 1-2 days and following this they should be secured in bundles 30-40 centimeters thick. The drying out should be completed in 6-8 days. The rameal feed is usually fed to the livestock in the form of cuttings 1-2 centimeters long and in a stewed form.

Woody green materials can be used for the production of meal by means of artificial drying out; this makes it possible to retain the nutrients contained in it. Equipment intended for obtaining grass meal can be used for producing vitamin meal from woody green material obtained from coniferous and deciduous trees.

Common reeds at a young age are willingly consumed by large-horned cattle and horses. One kilogram of common reed hay contains 0.42-0.44 feed units and 33 grams of digestible protein.

The reeds can also be used for silage. It is important that they be cut down on a timely basis. The best period for harvesting the reeds for silage is when they are in their shooting to tasseling period. During this period the plants reach a height of one and a half meters.

During ensiling, the fodder of common reeds must be thoroughly minced and packed so as to prevent the development in it of lactic acid bacteria. Fine packing of the reed cuttings serves to guarantee that high quality silage will be obtained. The

silage obtained from common reeds should be placed in trenches or in other silage installations.

Five-Month Production Data

Frunze SOVETSKAYA KIRGIZIYA in Russian 28 May 82 p 2

/Article: "Intensifying the Production of Feed"/

/Text/ In order to ensure that the population is continuously supplied with livestock products, increases must be achieved in the milk yield per cow and in the average delivery weight for cattle. "This matter is of paramount importance" emphasized Comrade L.I. Brezhnev in a report delivered before the May (1982) Plenum of the CC CPSU, "improvements in the qualitative structure of the herd, improvements in breeding work and the breeding of highly productive strains of animals. And it goes without saying -- considerable growth in feed production, improvements in the quality of the feed and in its proper use."

The kolkhozes and sovkhoses in the Dolina zone of Oshskaya and Talasskaya Oblasts and the Chu River Valley, taking into account the unfavorable weather conditions of this year, prepared their feed harvesting equipment in a timely manner and have commenced cutting down their grasses.

Beginning with the very first days, many farms have been procuring their feed at a high tempo. According to operational data, by 25 May the grasses had been cut down on 68,600 hectares, or 33 percent. More than 5,000 hectares are being mown daily. The kolkhozes and sovkhoses in Issyk-Atinskiy, Kantskiy and Sokulukskiy Rayons are carrying out their haying work in a rapid manner.

The workers at the Kolkhoz imeni Lenin in Alamedinskiy Rayon are leading the grass harvesting competition in the Chu River Valley. In carrying out the measures developed during an open party meeting held in response to a letter from the Central Committee of the Communist Party of Kirghizia entitled "We Will Overcome the Water Deficit Problem," they obtained their first cutting of perennial grasses rather quickly. By reducing their harvesting periods and intensifying their tending of the crops, the farm's feed procurement specialists resolved to obtain an additional full-value cutting and to harvest no less than an average of 120 quintals of alfalfa per hectare in a conversion for hay. And they have remained true to their word. At the present time, the second harvest is approaching here; the perennial grasses have already entered the budding phase.

This year the kolkhozes and sovkhoses are devoting special attention to procuring vitamin-grass meal and granulated feed. By 25 May, more than 38,000 tons of granules and 9,000 tons of meal had been procured, or three times more than the figures for this same time last year. Considerable increases were recorded in the production of these feeds on farms in Oshskaya Oblast and in Issyk-Atinskiy, Kantskiy, Sokulukskiy and Moscow Rayons. A summary published on 25 May 1982 provides good insight into the course of the grass harvesting work in the oblasts and rayons.

It bears mentioning that the farms in Oshskaya Oblast and Chuyskiy and Keminskiy Rayons are harvesting their first cutting at a much lower tempo than the average

	Hectares Harvested		Production Since Beginning of Season			
	Since the beginning of the season	In %	Vitamin grass meal	In %	Granules, in tons	In %
Kirghiz SSR	68646	33	9304	10	38087	17
Oshskaya Oblast	19245	22	1601	14	20459	62
Issyk-Kul'skaya	-	-	-	-	-	-
Narynskaya	-	-	15	-	10302	55
Talasskaya	2223	6	275	2	431	1.3
Keminskiy Rayon	1246	17	97	7	100	0.7
Chuyskiy	1155	15	349	21	349	6
Issyk-Atinskiy	3956	78	1536	36	1412	18
Kantskiy	5710	67	1363	13	1377	7
Alamedinskiy	3768	48	350	6	339	3
Sokulukskiy	10366	69	1478	17	1369	9
Moscow	6439	50	1399	14	1296	11.8
Kalininskiy	7391	51	578	13	559	5
Panfilovskiy	7141	63	263	23	94	3

for the republic. Not all of the vitamin grass meal preparation units were included in the work. For example, only 4 of 16 units were in operation in Keminskiy Rayon, Alamedinskiy Rayon -- 8 of 16 and Panfilovskiy Rayon -- 5 of 9.

The republic's feed procurement specialists are confronted by a great and important task. They must ensure a satisfactory wintering period for the livestock and create good prerequisites for further growth in their productivity.

7026

CSO: 1824/390

LIVESTOCK FEED PROCUREMENT

MIXED GRASS-GRAIN FEED PRODUCTION IN NORTHERN RSFSR

Moscow SEL'SKAYA ZHIZN' in Russian 27 May 82 p 2

/Article by V. Semenov, candidate of agricultural sciences and general director of the Belogorka Scientific Production Association and A. Shishkin, professor and head of a laboratory for field feed production, Belogorka, Leningrad Oblast: "Intensive Annual Grass Mixtures"

/Text/ The kolkhozes and sovkhoses must carry out the measures required for the further intensification of field and meadow and pasture feed production and for raising the productivity of all feed lands, such that each farm will be able to satisfy fully the livestock production requirements for high quality coarse, succulent and pasture feed. (extract from the food program)

On farms in the northwestern zone of the RSFSR, the area of forage crops on arable lands exceeds 1.7 million hectares, with 60 percent of this area being occupied by perennial grasses, 19 percent by silage crops and 18 percent by annual grasses. During the tenth five-year period the cropping power of all of these crops on the average remained at roughly the same level and amounted to 120-130 quintals of fodder per hectare, or 19-21 quintals of feed units.

Compared to perennial grasses, the assortment of silage crops and annual grasses is very limited here. At best, annual leguminous grass mixtures are cultivated at the sovkhoses and kolkhozes for various purposes and at worst -- annual grasses in pure sowings.

Meanwhile, the potential cropping power of annual mixtures is very high. The productivity of annual mixtures can be raised by a factor of 1.5-2 through a biologically sound approach for selecting the components and by observing the optimum harvesting periods during the phase of maximum accumulation of nutrients in the plants. This is borne out by many years of study carried out at the Laboratory for Field Feed Production of the northwestern Belogorka NPO /Scientific Production Association/. Recommendations were developed here for the creation of highly productive annual grass mixtures which are distinguished by a longer growing season and intensive crop growth not only during the first but also during the second half of the growing season.

Among the intensive mixtures, we include mainly a triple-cutting leguminous grass mixture involving the participation of annual ryegrass. As yet, little is known

about annual ryegrass and yet it is a very promising crop for the northern region. This plant is unsurpassed in terms of its post-cutting aftergrowth. Moreover, it is early ripening and shade-enduring and it is capable of furnishing three cuttings during the summer in the Leningrad region, in both pure form and in mixed sowings. Mixed sowings of annual ryegrass, for example with barley and peas or with oats and vetch, raise the amount and quality of the crop, both during the principal cutting and also in the green production line. The mixtures are cut during the heading to blossoming phase for green feed or for the preparation of grass meal. After 35-40 days have elapsed following the principal cutting, the ryegrass forms a second and thereafter a third crop, with the overall yield surpassing by two and a half times that obtained from the usual single-cutting mixture.

During one particular experiment, a mixture consisting of oats, vetch and ryegrass, following three cuttings, produced an average overall yield of 446 quintals of fodder containing 11.6 quintals of protein. Oats and vetch predominated in the principal cutting and in the aftergrowth -- annual ryegrass. At the same time, the yield obtained from a single-cutting of an oats and vetch mixture during this same experiment amounted to only 211 and 5.4 quintals respectively.

The growing season is utilized even more efficiently when use is made of a spring undersowing, by means of the belt double-line method, of annual ryegrass in a mixture with vetch in winter rye sowings. This combination furnishes three good fodder crops during a summer.

A mixture of annual ryegrass with Chinese radishes warrants attention based upon its high energy of post-cutting growth. The high aftergrowth Izorskiy variety of it was created at the Delogorka NPO. The aftergrowth of this variety surpasses the aftergrowth of the widely distributed variety by 20-30 percent. The seed production for this ryegrass is stable. At the Pamyat' Il'icha Experimental Farm, the seed yield for this variety amounts to 4-6 quintals per hectare.

For the production of preserved winter feeds, extensive use should be made in the northern region of highly productive grass-grain mixtures, harvested using the non-threshing method during the phase of milky-waxy ripeness in the grain. Mixed grass-grain sowings consisting of grain forage and pulse crops, with the participation of an additional "green" component are grown in a crop rotation plan and not on a grain field but rather on annual grass and silage crop fields. From one and the same tract, they make it possible to obtain a multi-component raw material containing unripe grain, semi-dry straw and fodder. Depending upon the moisture content of the raw material harvested and the proportion of grain and other fractions in it, high quality mixed feed may be obtained in the form of grain-haylage (mixed haylage), grass-grain meal and mixed silage.

Among the spring grass-grain sowings, threefold mixtures stand out as having the greatest productivity: consisting of oats, peas and sunflowers; or barley, peas (or vetch) and oats. The experience of our association bears out the fact that such mixtures surpass in terms of cropping power annual mixtures harvested during the heading-to-blossoming phase by 50-60 percent and grain forage crops when fully ripe -- by 10-20 percent. These mixtures can be used as intermediate crops: on occupied fallow, in post-cutting and cover sowings and also as a preliminary crop during the development of new lands.

A mixture of sunflowers with grain forage and pulse crops, for the purpose of procuring mixed silage for large-horned cattle, is distinguished by high productivity. However, the technology for growing this mixture has its own peculiarities. Distinct from the grass-grain mixture employed for procuring grain haylage, the ratio for the individual components in a silage mixture must be different. The greatest proportion in the yield (60-70 percent) in this instance is occupied by the sunflowers and 30-40 percent -- the grain forage and pulse crops. The period for the harvesting and procurement of the silage mixture is established in accordance with the grain forage crop and with the onset of milky-waxy ripeness in the grain.

In the northern oblasts and republics in the nonchernozem zone -- in Leningrad and Arkhangel'skaya Oblasts, in the Karelskaya and Komi ASSR's and others -- the grain-grass sowings undergo extensive production checks. Over a period of a number of years, analysis of the results of these checks has convincingly underscored the advantages to be realized from the production of mixed feed compared to silage consisting of annual grasses. The production cost for 1 quintal of feed units in grain haylage turns out to be lower than that for conventional silage by 34 percent.

7026

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LIVESTOCK

LIVESTOCK SPECIALIZATION STUDIED AT POLTAVA CONFERENCE

Kiev SIL'S'KI VISTI in Ukrainian 20 May 82 p 2

[Article by S. Tsan'ko, "SIL'S'KI VISTI" correspondent: "More Production from Special Kolkhozes and Interfarm Enterprises"]

[Text] The solution of the provisions problem depends to a large extent on the development of agriculture, in which an important role is played by specialization and production concentration on the basis of interfarm cooperation and agroindustrial integration.

As already reported in our paper, the republican seminar-conference in Poltava was devoted to an improvement in the work of livestock raising complexes, a perfection of production and economic relations in interfarm cooperation. Below are notes from this seminar-conference.

There is Enough to Learn from Poltava Area Residents

Poltava area was not selected for this conference without reason. In recent years quite a bit was done here towards intensifying agricultural specialization especially in livestock raising. Meat production is now concentrated in 69 special kolkhozes and interfarm enterprises. Last year they sold to the state 79.4 thousand tons of production, 56.4 percent of the total amount realized by all kolkhozes in the oblast. Compared to similar farms and enterprises in the republic, Poltava area inhabitants achieve high work productivity, the lowest net cost per quintal of meat production and obtain the most income for the end results.

Seminar-conference participants had an opportunity to acquaint themselves thoroughly with the experience of these agricultural leaders. They were especially interested in the Belitskoe interfarm enterprise for beef production whose work was praised at the July (1981) Plenum CC Ukrainian Communist Party. "It is a true meat factory," was the excited comment by guests from many oblasts who

toured this complex with highly mechanized production processes and high veterinary-sanitary standards. Asphalted pathways lead to all working areas, livestock breeders are provided with excellent living quarters, a red corner, a dispensary, dining room and a technical training study room.

"Our enterprise," stated its director, CC Ukrainian Communist Party membership candidate O. H. Kyrychko, "was established eight years ago based on the fattening complex of the kolkhoz imeni Mate Zalke near the sugar combine. Capital investment for construction paid for itself in three and a half years. Now 39 kolkhozes and sovkhoses in our Kobelyatskiy and the neighboring Novosanzharskiy Rayons are equal partners in the enterprise. Every year we fatten almost 20,000 young stock of large horned cattle. The prime cost of a quintal of steer live weight increase amounts to 70 rubles with expenditures of seven to eight quintals of feed units and six to seven working hours.

Beef production level of profitableness is almost 60 percent. From its sale the enterprise obtains each year more than five million rubles income of which more than four million are distributed among enterprise partners."

Having recorded these high indices in their notebooks, conference-seminar participants wanted to "decipher" them.

"Of course," replied Olha Hryhorivna. "Steer are kept untied, in small, alike groups. We receive them from our partner farms for final intensive fattening weighing 270-280 kg. During three and a half to four months the weight of each animal reaches 400 or more kilograms and we deliver them to the meat combine generally weighing more. From the increases in heavy weight livestock alone the enterprise receives each year almost 3 million rubles income."

Steer feed ration was also of interest. Sixty percent of it consists of fresh or sour pulp. Depending on weight and fattening period, each animal is daily fed 40-50 kg pulp, 2-3 kg straw, 1.5-2.5 kg mixed feed, 1 kg molasses and stewed postalcoholic molasses grains, and also synthetic urea, diammonium phosphate, Glaubers and kitchen salt, trivitamin oil concentrate and growth stimulators. Rations are balanced according to general nutritiousness, protein content, dry and mineral substances according to an appropriate sugar-protein ratio.

Efficient, scientific work organization has been introduced at the complex based on a workshop-brigade production system. Brigades have been set up for pulp and coarse feed delivery and distribution, manure removal, etc. Professional duties were divided not only among separate worker categories, but also within the team which promotes better organization of production processes. One master operator takes care of 550 steer.

Workers at the complex are paid according to the quantity and quality of production obtained.

The relationship between the enterprise and cooperating farms is businesslike and mutually convenient. Young stock accepted for fattening is evaluated according to a planned standard. After five days the enterprise settles accounts with farms supplying cattle from revolving funds and short-term credits. Final accounts with partners are settled after delivery of animals to the state for meat. This depends on the number of fattened steer, average daily weight increase, the amount of farm allotted feed and cattle realization conditions.

The gross live weight increase obtained by the enterprise is divided among participating farms according to the number of feed days and is added to their meat production. The feed unit is used as a standard in dividing income. All feed obtained from farms is converted into it as well as young stock weight received in the enterprise for final fattening.

The largest pig-fattening complex in the oblast is at the "Ukrayina" kolkhoz in Mashivskiy Rayon. Seminar-conference participants saw and heard many instructive things there. Complex working methods are in accordance with scientific and practical achievements both domestic and foreign. They have developed a cyclogram for an eight-day production rhythm. Every eight days animal production groups are formed, providing young stock for complex needs, realizing commodity pigs. During the same period of time 600 animals are taken off the fattening routine with an average weight of 105-110 kg each.

Based on the cyclogram shelter size is determined and the proportion of essential production areas needed for animals of different ages and physiologic states. To obtain a quintal of weight increase, 5.6-6 quintals of feed units are expended. In the summer sow pasturing is practiced widely aided by "electrical shepherds." Thus they economize on grain forage and obtain healthy young stock.

Pigs are fattened without pasturing. The process of distributing mixed feed is the same in all animal shelters. Using a ZSK-10 feed is loaded into accumulation hoppers. From there it moves automatically to the receiving hopper of the stationary feed distributor. At feeding time the line-washer distributor is turned on and the feed is transported to the dosers, is then thrown into troughs and moistened with water.

The scraping-floating system of manure removal is promising and economical. To provide for optimal microclimate, complete sets of "Klimat" equipment are used.

Thanks to specialization, pig raising became the farm's chief and highly profitable branch. In the 10th Five-Year Plan 1.75 million rubles net profit was obtained from the sale of pork, pork production increased by 78.6 percent, and its realization extent doubled.

In the 11th Five-Year Plan the complex collective is working even more persistently. Last year, for example, they obtained 22,000 pigs which made it possible to produce 246 quintals of pork per one hundred hectares of arable land. This year for the 1618 tons planned, 640 tons of production were sold to the state in the first quarter alone. Branch profit amounts to 56 percent.

At the sovkhos imeni Shevchenko in Poltavskiy Rayon seminar-conference participants visited a dairy farm. Four hundred black-spotted cows are kept there. In the past five-year plan each yielded an average of 4763, and last year almost 5000 kg milk per year. Now they milk 14 kg milk from each cow every day.

Sovkhoz manager, hero of socialist work V.V. Osypchuk and chief farm zootechnician I.M. Martynenko told us in detail about reasons for their success. The farm has a high level of breeding pedigree work and well organized herd reestablishment. Full year haylage-silage type of cow feeding with feed from storehouses has been introduced. Good production, housing and living conditions have been established for livestock raisers.

High work indices have been achieved by the Lokhvytske interfarm poultry enterprise, the specialized dairy production kolkhoz "Druzhba" in Karlivskiy Rayon and many other collectives. The Poltava interfarm mixed feed industry each year produces almost 500,000 tons of mixed feed, of those 45,000 tons starter type. This is more than in other oblasts.

Seminar-conference participants also visited the fields of kolkhozes imeni Mate Zalka in Kobelyatskiy Rayon, "Mayak Komunizmu", imeni Rayans'koyi Konstytutsiyi and imeni Shevchenko in Novosanzharskiy Rayon, imeni Karl Marks, Mashivskiy Rayon, "Progres" and "Bil'shovytska Pratsya" in Karlivskiy Rayon where they saw grain, industrial and feed crops being grown with a plowless method of tilling soil.

The Main Branch - The Chief Concern

Quite a number of good words about the Poltava area people's contribution to specialization and concentration in livestock raising and feed production on the basis of an interfarm cooperation were said at the conference-seminar plenary session.

The first secretary of the Poltavskaya Oblast Committee, Ukrainian Communist Party, F.T. Morhun familiarized seminar-conference attendants with oblast economic and social-cultural development, describing the work of rural workers in fulfilling the 26th CPSU Congress decisions.

O. I. Tovstanovs'kyy, First Deputy Minister of Agriculture UkSSR, head of the republican inter-departmental council on specialization and cooperation, gave a report on the work of agricultural organs in further development of specialization, cooperation, and providing for full use of animal complex capabilities.

In the present five-year plan, noted the speaker, it is planned to increase the production of gross agricultural output in the republic's kolkhozes and sovkhozes by 16.2 percent. To accomplish this task successfully, it is essential to continue with specialization and production cooperation, improving the management mechanism in these conditions, trying to achieve highly effective activity by each subsection of the agroindustrial complex.

In addition to Poltavskaya Oblast, some success in this direction has also been achieved in Dnepropetrovskaya, Cherkasskaya, Kievskaya, Khmel'nitskaya, Ivano-Frankovskaya and a number of other oblasts. The experience of Ivano-Frankovsk area people in large horned cattle herd reestablishment merits particular attention and expansion. In 12 oblast rayons there are 22 specialized farms which raise cows calving for the first time on their own feed. In practice, they became breeding centers which conduct credible evaluation and well-founded selection, forming a dairy herd of high quality livestock.

Rayons with a great deal of experience in specialization and cooperation are: Verkhnyodneprovskiy in Dnepropetrovskaya Oblast, Veselivskiy in Zaporozhskaya, Balakliyskiy in Kharkovskaya, Bashtanskiy in Nikolaevskaya, Dunaevetskiy in Khmel'nitskaya, Glibotskiy in Chernovitskaya, Beryslavskiy in Khersonskaya and Pereyaslav-Khmel'nitskiy in Kievskaya Oblast.

Many livestock raising complexes became examples of present day industrial production. One of them is the dairy complex at the kolkhoz "Ukrayina", Vasyl'kivskiy Rayon, Kievskaya Oblast, where last year 3672 kg milk were obtained from each of 800 cows, and calculated at 100 hectares of pasture, 3114 quintals were produced. High effectiveness in milk production is also achieved by kolkhoz "Zhovten'" in Maryinskiy Rayon, Donetskaya Oblast, sovkhoz "Ploskivs'kyy" in Brovarskiy Rayon, Kievskaya Oblast and kolkhoz "Pershe Travnnya" in Snyatynskiy Rayon, Ivano-Frankovskaya Oblast, in beef production - Kupyansk interfarm enterprise in the Kharkov area, pork production - kolkhoz "Peremoha" in Pokrovskiy Rayon, Dnepropetrovskaya Oblast, Chornobayiv interfarm enterprise in Cherkasskaya Oblast, in raising heifers - kolkhoz imeni 19th Party Congress in Krasnogvardeyskiy Rayon, Krymskaya Oblast and "Mayak" in Gusyatinskiy Rayon, Ternopolskaya Oblast.

The republic's sovkhozes have also done some work in agricultural specialization and production concentration. As a result, stressed V.M. Lukyanchuk, Deputy Minister of Sovkhozes UkSSR, in his co-report, specific weight of milk production in specialized farms and

complexes amounts to 36 percent, 50 percent for beef, 76 percent for pork and 100 percent for eggs and poultry.

Changing agricultural production to an industrial basis depends a great deal on farm or complex technical equipment, servicing and repair of machinery and implements. V.S. Kharchenko, deputy chief of the State Committee On Agricultural Machinery, cited the following: In the 10th Five-Year Plan alone the republic's farms obtained 1.2 billion rubles worth of machinery and livestock raising mechanization equipment, and in the present five-year plan one and a half billion rubles worth will be supplied.

However, stressed the seminar-conference, the opportunities which exist in specialization and agricultural production concentration based on interfarm cooperation and agroindustrial integration are far from being fully utilized. For example, at Sumskaya, Volyn'skaya and Nikolaevskaya Oblasts there is a low level of production cooperation showing a negative effect in agricultural development. A number of interfarm enterprises in Ternopol'skaya, Chernovitskaya, Khersonskaya and Kharkovskaya Oblasts do not yield appropriate returns. In Sumskaya, Kirovogradskaya, Volyn'skaya and several other oblasts the capabilities of established specialized and interfarm formation production potential are not utilized fully especially in livestock raising complexes and large complex-mechanized farms. Specialized farms and interfarm enterprises in Nikolaevskaya, Odesskaya and Zhitomirskaya Oblasts do not carry adequate supplies of livestock and fowl feed.

"Although our enterprise is considered advanced, it has not yet reached the level of which it is capable," stated A.N. Strel'chenko, director of the Bashtanskiy interfarm enterprise for animal output production in Nikolaevskaya Oblast. An analysis shows that last year at least 1.7 thousand tons of large horned cattle weight increase could have been obtained, also 3,000 tons of pork and 14 million eggs which is considerably more than was attained. One of the chief problems was that participating farms did not supply enough feed for the enterprise.

G.S. Tyvonchuk, manager of the Ivano-Frankovskaya Oblast agricultural administration, also talked about the experience and problems in developing specialization and cooperation. "Specialized enterprises in our oblast produce half of our beef, 72 percent pork, 83 percent milk, more than 90 percent poultry production and raise 67 percent of cows calving for the first time.

However, some things are disturbing. A third of the pastures in Prykarpattya are natural meadows, and half of them are Alpine. Yet, only 26 kg of active substance mineral fertilizer are allotted to us per hectare of these pastures. We think that norms should be reviewed and the amount of fertilizer for natural pastures of this region should be increased.

Mountain rayons produce 40 percent of their production out in the mountain pastures. These become infested with Alpine sorrel, but the scientists have not yet found a method of combatting it.

L. A. Chernyavs'kyi, deputy chairman, Dnepropetrovskaya Oblast executive committee, also touched upon important issues.

"Mistakes permitted during the planning of livestock raising complexes often cause problems. When dairy complexes are built in the oblast now many plans are used. Some of them are inadequate, requiring a whole complex of varied equipment, sometimes still unavailable from the industry."

Typical essential plans are lacking for feed shops with an effective processing of food scraps, farms for raising heifers, and also calving sections for cows appropriate to conveyor-shop system of milk production. Planning-designing organizations do not supervise the project, their activity is not dependent on the work's final result here or elsewhere.

A Partnership Has To Be Equal

Both speakers, the director of the Ukrainian Scientific Research Institute of Economics and Agricultural Organization imeni A.H. Shlikhter, doctor of economic sciences, professor O.O. Storozhuk, and department head, Institute of Economics, Ukrainian Academy of Sciences, doctor of economics, professor O.M. Onyshchenko, as well as the first secretary of the Mar'yinskiy Rayon party committee in Donetskaya Oblast, P.L. Sorokotyaha, manager of kolkhoz imeni Engels in Novopetrovskiy Rayon, Voroshilovgradskaya Oblast, I.I. Zaporozhets' and others gave a lot of attention to issues dealing with production-economic relations in farm cooperation.

It was stressed that cooperation is a friendship of equal partners who should be guaranteed returns directly in proportion to their participation in joint production. Therefore, when the interests of even one cooperation member are pinched, his desire for cooperation will, quite naturally, be lost and the cooperation goal will not be achieved. This occurred in Odesskaya, Chernovitskaya, Lvovskaya, Zaporozhskaya, and Vinnitskaya Oblasts. Here instead of meticulous organizational work and concrete aid to active inter-farm formations in creating essential conditions for effective work mechanical change was used instead of cooperation. As a result, in most reorganized interfarm enterprises the extent of output production decreased considerably and economic indices deteriorated.

If on the average in the republic interfarm enterprises every year return to the farms 44-45 percent income, even 68 percent in Poltavskaya Oblast, in Nikolaevskaya, Khersonskaya, Vinnitskaya and Zakarpatskaya Oblasts it is only 9-16 percent.

Here is another fact. There are nine active interfarm hothouse combines which can influence kolkhoz economics substantially. This is how it was arranged in the Volyn'skaya Oblast. In the past year the Lutsk combine obtained 1.6 million rubles income of which 1.1 million rubles were distributed to farms. Almost half of funds received were returned to the kolkhozes by the Cherkassy hothouse combine. According to an established order interfarm formation income belongs to the participating farms, which created it, and therefore the problem of utilizing this income is decided only by their or authorized representative agreement. However, some hothouse combine managers at times dispose of the funds using their own judgement. Last year the Vinnitsa, Ivano-Frankovsk, Khmel'nytskiy, Kherson and Chernovtsi hothouse combines received 3,485,000 rubles income, yet cooperating farms received nothing.

Violations of one of the chief principles of cooperation, the financial interest, occur in some mixed feed factories, "Sil'hospenerh" association, biolaboratories, and other enterprises which service kolkhozes and sovkhoses. These and other violations must be corrected. Fair organizational-production and economic mutual relations should be established at each interfarm enterprise.

To Work Effectively With High Returns

Yu.P. Kolomiyets', candidate to Politburo membership, CC Ukrainian Communist Party, first deputy chairman, UkSSR Soviet of Ministers also spoke at the seminar-conference.

He stressed that one of the most important conditions for further development of agricultural production, especially livestock raising, is a deeply thought out, goal directed realization of specialization and cooperation and an increase in the effectiveness of the already established production potential. Almost 4,000 interfarm agro-industrial, production and scientific-production enterprises and associations are active in the republic. Farm cooperation is growing in the production service and social spheres. All kolkhozes and most sovkhoses are participants in interfarm formations.

Specific weight of interfarm and specialized enterprises in the total production extent by the public sector amounts to: 30 percent for beef, 50 percent for milk, pork and fruit, 65-70 percent for potatoes, vegetables and poultry and more than 80 percent for eggs. There are many convincing examples of highly effective work by these enterprises.

Yet, it must be admitted that the great possibilities in specialization and concentration are not utilized sufficiently. Not all specialized farms established through general efforts of kolkhozes and sovkhoses and which have ample funds work with appropriate efficiency. In Khersonskaya, Voroshilovgradskaya and Rovenskaya Oblasts there are many unprofitable milk production complexes,

in Donetskaya, Chernovitskaya and Kirovogradskaya Oblasts - beef production complexes, in Vinnitskaya, Sumskaya and Kievskaya Oblasts pork production complexes. The primary reason for losses is that these enterprises do not assure intensive production development.

In a number of oblasts complex production capabilities are not utilized fully and thus considerably less livestock raising production is obtained.

Along with objective reasons, which affect complex and large mechanized farm work negatively, there are also serious errors and omissions on the part of ministries and departments, local agricultural organs, farm managers and specialists. Chief among them are insufficient animal feed, unbalanced rations, inappropriate feed crop sowing area as compared to complex specialization.

To remove these shortcomings the feed basis must be well organized. Planned complexes and large farms should be provided with feed of their own production. Feed production should be an independent branch in complexes and specialized farms. Funds expended for this purpose must yield a return.

Each complex should have an exact program developed for providing cattle with high quality feed, completely nutrient-balanced the whole year.

The organization of highly productive livestock renewal suitable for industrial technology must be substantially improved. Problems related to the establishment of complex and large mechanized farm pedigree basis should be decided first and not last. Because of shortcomings in this work a considerable number of livestock delivered to the complexes is of low productivity and is lost prematurely.

In many instances the production-technical servicing of livestock raising complexes by enterprises and organizations of the State Committee on Agricultural Technology does not meet present day standards. Irregular electrical supply hinders the work of these complexes. The UkSSR Ministry of Energy and Electrification and its local services must be advised of these serious shortcomings and all measures must be taken to remove them.

Errors and miscalculations during planning and construction have had a negative affect on the dates and level of capability mastery in a number of complexes. Plans often included technological and engineering-construction decisions which were not tried out in practice, local natural, economic and social conditions were not fully considered. Therefore, the value of one animal place continues to increase. Thus the "Ukrndiprosil'hosp" institute designed individual plans where the value of one animal place is twice more than the permitted norm.

In recent years some managers have decided that livestock raising intensification problems should be resolved basically by new construction. In the past two five-year plans more than 2,000 complexes and large mechanized farms went into effect in the republic. Almost 5.6 million rubles were used for their construction, or 12 percent of the total extent of capital investment into agriculture. Yet, having started new complex construction, in some places less attention was given to utilizing old livestock shelters and many of them stand empty.

At the July (1981) Plenum CC Ukrainian Communist Party, CC CPSU Politburo member and First Secretary CC Ukrainian Communist Party comrade V.V. Shcherbyts'kyy spoke clearly about this issue: "The time has come for a painstaking inventory of all livestock raising farms, a determination of what work needs to be done and when, so that all livestock is allotted to appropriate places. In other words, we must know exactly where we can and should rebuild, and where new construction must be undertaken..."

To assure successful work at livestock raising complexes and in large mechanized farms equipped with numerous and complicated technology, we must provide for better preparation of highly qualified specialists and popular occupation personnel.

Production and economic mutual relations between cooperating enterprises must be improved. Cooperative participating farms should be aware of the plans for sale of livestock raising products to the state. Account settlement and the accepted order of final income division should compensate interfarm enterprise expenses (not actual but normative), providing them with the needed accumulation level for expanding production and promoting an income equalization for cooperative participants.

There is insufficient scientific research on improving economic mutual relations between enterprises and organizations in the UkSSR State Committee on Agricultural Technology, Ministry of Water Resources UkSSR, Ukrainian inter-kolkhoz construction, procurement, transportation and other organizations with kolkhozes and sovkhoses with the goal of providing a proportional development of all branches in the republic's agrarian-industrial complex. The responsibility for the development of agricultural production and for branches servicing it must be raised considerably. This also applies to interfarm servicing enterprises. They should work on a profitless basis or with a minimal profit.

At the July (1981) Plenum CC Ukrainian Communist Party the importance of continuing planned work on further expansion of specialization and production concentration was stressed as well as the development of interfarm cooperation. An inventory was taken of complexes and large farms for a more complete utilization of production capabilities and an increase in work effectiveness; organizational

technical methods were developed providing for structure improvement in sowing area, increasing the amount and improving the quality of feed, provision of essential livestock and raising production technical level. Steps are being taken to raise now active livestock raising complexes to planned capability in the next two years, making them model enterprises.

Seminar-conference participants passed a resolution supporting further development of specialization, cooperation, mastery of complex capability, and improving production-economic relations in farm cooperation in livestock raising and in feed production.

9443
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LIVESTOCK

RECOMMENDATIONS FOR SPRING-SUMMER LIVESTOCK MAINTENANCE IN UKRAINE

Kiev SIL'S'KI VISTI in Ukrainian 15 May 82 p 1

[Article by O. Okopnyy, deputy minister of agriculture UkSSR:
"Summer Farm Production"]

[Excerpt] At the meeting of the republic's party-agricultural activists Politburo member CC CPSU, First Secretary CC Ukrainian Communist Party, comrade V.V. Shcherbyts'kyi stressed that the present time is full of responsibilities for livestock raisers since a difficult cattle wintering period is drawing to an end. Because of insufficient feed a number of oblasts did not fulfill their planned quarterly procurement, providing the state with less production, especially milk. Therefore, it is very important to strengthen the control over the state of affairs on each farm, utilizing the spring-summer period maximally to not only fulfill production plans but also compensate some of the production of which less was obtained during winter. Especially important are measures to establish an uninterrupted green production line on each farm, raising the yield of feed crops and natural pastures to accumulate adequate supplies of high quality feed.

Particular attention at the republican school was given to correct work organization during the transitional period from winter-stall to spring-summer cattle maintenance. In this period especially some farms commit errors in cattle feeding. On these farms, where the goal is to raise productivity as quickly as possible, on the first day of green mass arrival the winter ration is completely changed to 40-50 kg green chop. Consequently, there are digestive problems, the cattle gets ill, there is no increase in milk.

The reason is, first of all, the sharp decrease of dry substance in the ration and a break in the correlation between elements of mineral feeding, especially between potassium and sodium. And, regardless of the sharp rise in the ration power potential, the negative action of the above factors leads to cattle illness and a lowering of its productivity.

Therefore, cattle should be shifted to green chop gradually, within 10-15 days with consideration of its fatness and physiological

state. The first three to five days 1-2 kg of green mass should be given along with the winter ration, without changing its content. During the next five days there should be a gradual increase of such feed by 3-5 kg per day, decreasing at the same time the amount of succulent and coarse feed. Then, analyzing the cattle's physiological state, during the next 5-7 days the amount of green mass is brought up to the planned ration.

Zoospecialists should instruct livestock breeders on all farms in cattle feeding technology during the transitional period so that each one of them could competently regulate this process, using individual feeding of underfed and poorly developed animals when needed.

The transitional period has this specific requirement: When exchanging coarse and succulent feed for green chop the total ration nutrition content must not be changed.

Prior to starting green chop feeding, it is essential that all farms have a zootechnical analysis done to determine their actual nutrient content and the presence of biologically active substances. Based on the analysis insufficient amounts of nutrients should be compensated appropriately. If it is possible, the amount of green chop or concentrates with an increased sugar content should be raised by 10-15 percent.

Hay, haylage or straw are used to supplement livestock ration dry substances. Under this year's conditions all farms should also include 2-3 kg straw mixed with green chop. In each case the amount of straw included is determined by the presence of cellulose in the dry substance whose specific weight should be 15-28 percent.

In the spring and summer periods, and especially during rainy weather, sodium, calcium and phosphorus deficiency increases in cereal-pulse grasses. The cattle needs more salt than in winter because with green chop there are four to five times more cripples. This leads to organism sodium depletion and saline hunger.

It has been determined that cows whose yearly milk productivity is almost 3500 kg have a 45-day sodium supply. Afterwards the average daily milking is dependent on salt consumption. Therefore each cow should be given daily in addition to licking salt, 100-120 g of kitchen salt along with concentrated feed or dissolved. To improve phosphorus-calcium consumption, daily feed phosphates should be increased by 25-30 percent. Cow ration ratio of calcium to phosphate should not be higher than 1.5-3 to 1.

Microelement shortage is supplemented by adding 30 mg zinc, 8 mg copper, and 1 mg cobalt to one kilogram dry substance cow ration.

As was stressed during school instruction, the special requirement is proper control of summer green chop and other feed addition to

cattle rations to obtain optimal nutrient ratios: protein-energy, sugar-protein and other.

The ration should contain an appropriate amount of digestible protein and easily digested carbohydrates - sugar and starch. This is controlled by a protein-energy and sugar-protein ratio. If the first has to correspond to a specific productivity level, then the second should be 1 to 1-1 to 1.2.

It is very important to organize high-quality cow feeding with consideration of their physiological state. Research has shown that during the first one hundred days after calving the cow uses 60-65 percent of ration nutrients for output production, and in the next hundred days up to 50-55 percent. The rest of the time the ration productive part decreases even further and advancing feed does not raise productivity. Therefore, in the spring-summer period primary attention should be given on each farm to high quality feeding of cows which had calves.

Following principles of standard livestock feeding, depending on its physiological state, specialists in many kolkhozes and sovkhoses attain high productivity by utilizing green chop effectively. This is evident in the experience of kolkhozes imeni Kirov in Skadovskiy Rayon, Khersonskaya Oblast, "Ukrayina" in Gorodotskiy Rayon, Khmel'nitskaya Oblast, "Ukrayina" in Volodarskiy Rayon, Donetskaya Oblast, "10-Richchya Zhovtnya" in Prilutskiy Rayon, Chernigovskaya Oblast and sovkhos "Shyroke" in Simferopol'skiy Rayon, Krymskaya Oblast. Livestock raisers here obtain each year 4500-5000 kg milk per cow.

At school instructions specialists from Chernigovskaya Oblast shared their experience in utilizing green chop - herding tethered young stock of horned cattle. In the past they thus obtained 600-800 grams of average daily animal live weight increase, lowering expenditures for beef production considerably. This method has spread to farms in Sumy and Volyn' area. It should also be introduced in other oblasts of the republic where such possibilities exist.

Good organization of summer outdoor pig maintenance with extensive use of green chop in rations play a very important role in improving pig health and productivity and in obtaining inexpensive meat.

The experience of livestock raisers in Chernigovskaya, Poltavskaya, Zaporozhskaya and a number of other oblasts shows that keeping pigs in summer outdoor camps and introducing 20-30 percent of green chop into their ration, mixed with concentrated and other feed, assures high productivity, lowering the prime cost of pork considerably. In this year's conditions this experience should be introduced on each farm.

School instruction also stressed the need for highly effective utilization of the spring-summer period for improving sheep raising. Controlling pasture productivity, specialists have the responsibility to organize sheep feeding with green chop and coarse feed mixtures on each farm.

The republic's Ministry of Agriculture worked out and assigned to farms measures for summer livestock camp maintenance and compensation for the lower amount of production received during wintering.

Special attention should be given to timely delivery of green chop to the camps. Each farm should have permanent teams. They should be equipped with technology and transport and their work pay should be dependent on fulfillment of planned milk or other livestock production.

Where perennial grasses or other feed crops are damaged, which can lead to a decrease in the receipt of green mass in specific periods, the necessary amount of early silage and haylage must be stored.

We have to set up regular camp water delivery assuring a full supply for the livestock.

Farm work in the summer period should be reviewed continuously and expertly by specialists, kolkhoz and sovkhos management. Matters should be so arranged that it would be known each day when and how much feed was taken to the farm, what type of work schedule exists there, what is holding up a productivity increase and, when necessary, shortcomings should be removed.

In the spring-summer period all farms should be equipped with permanent and substitute workers and with suitable conditions for productive work and rest. In rayons with distant livestock camp maintenance warm food and medical service should be available to the livestock workers.

A well arranged summer livestock encampment providing for an increase in livestock raising productivity and in the sale of farm production to the state is an important national-economic goal.

9443
CSO: 1811/43

LIVESTOCK

LIVESTOCK PRODUCTION ON PERMSKAYA OBLAST PRIVATE PLOTS

Moscow SEL'SKAYA ZHIZN' in Russian 9 Jun 82 p 2

[Article by I. Zakirov, Permskaya Oblast: "Farmyard Reserves"]

[Text] On each occasion when the results of farming and livestock product procurements from the population in the Kama River region are summarized, the residents of Al'nyashinskiy Village Soviet in Chaykovskiy Rayon invariably are mentioned as being the most active suppliers.

And they are truly setting a fine and genuine peasant example of proper management of their farmstead. The residents of 449 of the 514 farmyards included in the five villages of the soviet are maintaining different types of poultry and in the vicinity of each home there is a spacious and well tended garden, from which generous yields of potatoes and vegetables are maintained.

Certainly, all of this did not just suddenly appear. In the restoration and strengthening of their private plots, the residents received constant assistance from the executive committee of the village soviet and the administration of the Bol'shevik Kolkhoz. It is sufficient to state that during the last 3 years alone the kolkhoz sold to the population 33 cows, 320 calves and also 3,247 young pigs from its specially created non-commodity hog farm.

The people have areas on which to graze their poultry and also facilities for storing their feed for winter: 450 hectares of natural haying and pasture land -- 1 hectare per cow -- presented to them for extended use. Here again the kolkhoz furnishes assistance in raising the productivity of these lands: it allocates mineral fertilizers and seed for meadow and pasture grasses and it provides equipment for harvesting the hay and for moving the stacks of hay from the mown areas to the private plots. In addition, each year the kolkhoz allocates up to 250 tons of grain forage and straw for private livestock production use.

And the people are not besieging the administration with requests to write off the milk and meat. The surplus products being sold are credited to the plan for public production. Last year alone, 756 quintals of milk and many hundreds of quintals of meat procured from private plots were added to the Bol'shevik's plan. At the present time, on the basis of an agreement with the kolkhoz, the residents are fattening 100 calves on their farmsteads.

Here the leaders do not consider it a shameful practice to engage in private plot farming. For example, the chairman of the Al'nyashinskiy Village Soviet Stepanida Foteyevna Chizhova and her husband Mikhail Fedorovich, deputy chairman of the kolkhoz, maintain a cow, a young bull and some poultry.

Concern is also being displayed for the private plots in other areas of the Kama River region. A record amount of milk for the oblast -- an average of 738 kilograms per cow and an overall total of more than 100 tons -- were procured last year from the population of the Kamenskiy Village Soviet in Il'inskiy Rayon. During the past five-year plan, the population in Yus'vinskiy Rayon in the Komi-Permyatskiy AO supplied the state procurement points with 2,200 tons of meat and 4,500 tons of milk, one tenth of the total amount procured from private plots throughout the oblast on the whole. This was primarily the result of the farmyards being supplied with adequate amounts of feed: more than 12,000 hectares of pasture and haying land were set aside here for use by the private sector, the network of milk receiving points was well developed, the milk collectors are being selected in a timely manner and they are being provided with the required implements, documentation and transport equipment.

A rather interesting phenomenon, although not too widespread in nature, is taking place in Permskaya Oblast -- the merging of private plots into associations, especially in rayon centers. They are being created for a number of purposes: for ensuring a better supply of feed and zootechnical services and for achieving systematic breeding work and the organized marketing of surplus products. For example, the Suksun Livestock Production Association, created in 1978, is performing rather successfully. It includes more than 300 private plots having 279 head of large-horned cattle, including 226 cows and 76 hogs. Five hundred and eighty hectares of haying land and also equipment -- two tractors, a truck and mowing machines have been assigned to it for permanent use. Last year the members of the association harvested hay from 137 mowings and obtained a sufficient amount for all of the farmyards.

All of this underscores the great potential possessed by the peasant farmyards with regard to the practical implementation of the food program adopted during the May Plenum of the CC CPSU.

But there is one disturbing fact: the number of large-horned cattle is decreasing in many rayons. During last year alone, the number of cows among the oblast's rural population decreased by 3,000 and in the case of all large-horned cattle -- by more than 6,000 head. At the present time, more than 140,000 farmyards, or 60 percent of their overall number, are not maintaining cows. Thus the procurements of livestock products from the population are decreasing. Yes and this is understandable: for every 100 farmsteads in the oblast, there are only 51 head of large-horned cattle, including 35 cows, 32 hogs and 64 sheep and goats.

One reason for this is the construction at kolkhozes and sovkhoses of multi-apartment buildings which lack outdoor facilities. Let us take the village of Lobanovo as an example -- the central farmstead of an experimental-production farm located some 18 kilometers from Perm'. It is impossible on these streets, so built up with apartment buildings, to maintain a cow or other small animals or to store hay or potatoes.

It would seem that the time is at hand for examining the general plan for the construction of a farmstead, with full consideration being given to the needs of the population. Over the past 3 years, 130 apartments have been built at Lobanova and yet not one of them has outdoor facilities. The leaders of the OPKh /experimental-production farm/ and the village soviet defend this position on the

basis of there being no land available for gardens or outbuildings. Nevertheless, many garages have appeared in the villages -- approximately 200 of them -- land was evidently found for these garages. And only one half of them are being used as intended. Calves and young pigs are being maintained in the remaining ones.

Unfortunately, the same situation is being encountered not only on suburban but also on some remote farms. Thus, of the 628 apartments built in Oktyabr'skiy Rayon during the past 2 years, only slightly more than one half of them have facilities for the maintenance of livestock and poultry.

Certainly, this is not the only reason for the weakening that is taking place in private plot livestock production. It is also declining in those areas where it is impossible to acquire young livestock and poultry, to graze cows, calves, sheep and goats or to procure hay for the winter. And there are more than enough such complications in the oblast. Is it possible to achieve rapid growth in the number of livestock and poultry on the private plots, when only 17 young pigs, 230 chicks and a very miserly number of calves were sold last year for every 100 rural residents?

Haying lands constitute a special subject. The oblast is not considered poor in terms of such land, with the overall area amounting to one half million hectares. Nevertheless, there is a shortage of hay each winter on the kolkhoz and sovkhos farms and on the private plots. Actually, many haying tracts have been neglected and have become overgrown with underbrush and weeds. And there was a time when they were characterized by rich grass stands. Prior to the war, 883,800 standard head of cattle were fed mainly by means of natural meadows. In 1940, the kolkhozes and sovkhoses alone laid in approximately 700,000 tons of meadow hay. Forty years later there were 820,600 standard head of cattle and just barely enough hay. For the private plots, only 76,300 tons of hay were laid away -- many times less than the amount for that pre-war year.

There can be only one conclusion: together we must, just as in former years, improve the natural haying lands and raise their productivity. And the private plots should not be provided with haying lands as an afterthought, when the grasses are already wilting, but rather it should be when the meadows are ripening and in a sufficient volume. There have been frequent instances of each working member of a kolkhoz being allocated only one fourth of a hectare of haying land and then during the latest periods.

Concern must be displayed for organizing the grazing of the private livestock. At a number of kolkhozes and sovkhoses the pastures are so crowded that there is no place for a cow to graze. The so-called fenced pasturages around towns and villages, which were used to sustain herds for hundreds of years, have been plowed up almost completely and the cattle drives to remote pastures eliminated. Today this must all be restored.

During a recent session of the Permskaya Oblast Soviet of People's Deputies, a business-like and thorough discussion took place concerning these and many other problems of the peasant farmyards. A specific program of measures was outlined for increasing the production of farming and livestock products in the private sector. In particular, the decision was made to increase the number of large-horned cattle

on the rural farmsteads to 153,000 by the end of the five-year plan, including 104,000 cows and up to 125,000 hogs; to assign for an extended period of use approximately 205,000 hectares of haying land and to sell to the population approximately 40,000 heifers, 640,000 young pigs and 9.3 million chicks. The present task consists of organizing this work in the various areas.

7026

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REGIONAL DEVELOPMENT

PRODUCTION COSTS, PROFITABILITY IN KAZAKH AGRICULTURE

Alma-Ata NARODNOYE KHOZYAYSTVO KAZAKHSTANA in Russian No 3, Mar 82 pp 70-76

/Article by B. Kaimov, candidate of economic sciences and head of a sector at NIIEPIIN of Gosplan for the Kazakh SSR: "Production Cost and Production Profitability"/

/Text/ Agriculture occupies a leading place in our republic's economy. It is becoming stronger year by year as a result of the consistent implementation of the party's agrarian policies. On 1 January 1981 there were 2,059 sovkhoses in Kazakhstan, including 147 large-scale specialized dairy sovkhoses, 86 meat and meat-dairy sovkhoses, 593 sheep raising sovkhoses, 60 pig farming sovkhoses and 57 poultry raising sovkhoses. In addition, there are 165 specialized farm associations for the fattening and maturing of livestock. One fifth of the gross agricultural output is produced by 400 of the republic's kolkhozes.

Today Kazakhstan occupies second place in the country, after the RSFSR, in the production of commodity grain, third place in meat and egg procurements, fourth place in milk production and second place in wool and karakul pelt production.

Tremendous resources are being invested in developing the logistical base for agriculture. During the Tenth Five-Year Plan alone, 13.6 billion rubles were expended for this purpose -- 22 percent more than during the preceding five-year plan. Fixed productive capital increased by 47 percent and amounts to more than 16 billion rubles.

What return is being realized from these great resources being allocated by the state for the rural economy of Kazakhstan? For what purpose are improvements being realized in the production equipment, technology and organization, why are labor expenditures being reduced and the quality of products improved? In the final analysis, this is being done in order to produce more products with less expenditures. And it is here that the production costs serve as an important economic lever.

The production cost factor in agricultural production has its own particular peculiarities and they are associated with the natural-economic conditions of the various regions. It is no secret that equal expenditures per hectare of sowing in the northern and southern oblasts produce different results. Thus the production cost indicator is very important for controlling the expenditure of funds and for evaluating economic activity.

This indicator is included in the planning tasks. But quite often it does not fully reflect the effectiveness of production. Analysis has shown that at a majority of the kolkhozes and sovkhoses in the republic growth in the amount of profit is determined mainly by an increase in the procurement prices and the volume of output sales and to a lesser degree -- by the production cost indicator.

A table composed on the basis of data for the ninth and tenth five-year plans furnishes an objective picture of the economic status of farming and livestock production at the republic's sovkhoses. It provides information on the production cost, the actual sales price for a product and on production profitability (see Table 1).

Table 1

Type of Product	Production Cost Per Ton, in rubles		Delivery Price Per Ton, in rubles		Profitability Level, in %	
	1971-1975	1976-1980	1971-1975	1976-1980	1971-1975	1976-1980
Grain	72	74	102	110	41.7	48.6
Potatoes	136	149	114	155	-16.2	4.0
Vegetables	131	150	127	144	- 3.1	- 4.0
Sugar beets	34	42	30	33	-11.8	-21.6
Milk	222	286	211	268	- 5.0	- 6.3
Wool	4056	5692	4390	5019	8.2	-11.8
Beef	1351	1637	1513	1629	12.0	- 0.5
Pork	1398	1583	1449	1384	3.6	-12.6
Mutton	750	1032	817	937	8.9	- 9.2
Poultry	1727	1803	1905	1886	10.3	4.6

A comparison in terms of profitability clearly does not favor the Tenth Five-Year Plan. And the chief reason for the unprofitable status of almost all of the principal branches of agricultural production -- growth in the production costs, regardless of the production volume or the sale price. For example, the average production cost for 1 ton of potatoes during the Tenth Five-Year Plan increased by 13 rubles, vegetables -- by 19, milk -- by 64, wool -- by 1,636, beef -- by 286 rubles and so forth. Moreover, it bears mentioning that the unprofitable nature of many branches arose even with considerable growth in the actual delivery prices (for example, the sales price for 1 ton of potatoes during the Tenth Five-Year Plan increased by 41 rubles, vegetables -- by 17, milk -- by 57, wool -- by 629 and beef -- by 116 rubles). Simply stated -- the rates of growth in production expenses exceed to a considerable degree the rates of growth for the delivery prices.

Let us compare two more indicators: growth in output production and in wages.

An increase in the prices for products is influenced by many expenditure elements, including growth in wages and expenditures for seed, fuel and lubricating materials, fertilizers and so forth. This is clearly seen in tables Nos 2 and 3.

The data furnished tends to confirm the disproportion prevailing at the present time: the total amount of the balance value for the fixed productive capital at the republic's sovkhoses (compared to the 1961-1965 period) increased by a factor

of more than four, while the increase in cropping power in field crop husbandry and livestock productivity lags behind by a factor of 4-6.

Table 2

Structure of Expenses Per Ton of Field Crop Husbandry Products

Type of product	Years	Expenses (in rubles), including								
		Wages	Seed	Fuel and lubricating materials	Fertilizers	Motor transport	Current equipment repairs	Other direct expenses	Vegetable production and general farm expenses	Amortization of fixed capital
Grain	1971-1975	12.8	14.7	4.2	3.0	5.3	8.7	7.2	9.5	12.8
	1976-1980	11.7	12.5	3.6	3.0	5.6	8.5	9.5	9.0	12.4
Potatoes	1971-1975	27.4	66.9	3.1	6.0	6.8	6.5	6.9	13.6	9.8
	1976-1980	24.4	68.7	3.0	6.3	7.5	7.4	12.7	13.4	12.1
Vegetables	1971-1975	54.7	16.7	3.4	5.2	5.5	6.9	9.4	19.4	9.9
	1976-1980	57.7	20.7	3.4	6.7	6.9	7.8	14.9	20.6	12.3
Sugar beets	1971-1975	15.6	0.9	0.9	3.5	1.5	2.2	2.0	4.8	3.0
	1976-1980	16.4	1.5	1.4	4.7	2.8	2.7	3.4	5.4	3.7

There are many reasons for such a difference. The less than optimum structure of the sowing areas inhibits the efficient operation of the soil-protection system of farming. For example, crop rotation plans have been developed in the republic for only 66 percent of the arable land and at a number of kolkhozes and sovkhoses they occupy less than 30 percent of such land.

The irrigated land, which constitutes more than 2 million hectares, is not providing a return in all areas for the funds invested: each year, for various reasons, 30,000-40,000 hectares of such land are not being utilized. In particular, the return from farms in the irrigated zone in Dzhambul'skaya, Taldy-Kurganskaya and Kzyl-Ordinskaya Oblasts is especially low. Moreover, in some areas its productivity is lower than that for non-irrigated lands. Thus the Kazakhstan and Tselinnyy Sovkhoses, which are located on the same Kzyl-Kum irrigated tract, produce different results. At the former, roughly 60 quintals of rice are being obtained per hectare annually and at the latter -- almost two times less. During the Tenth Five-Year Plan, the Kazakhstan Sovkhoz realized 2.8 million rubles of profit and the Tselinnyy Sovkhoz -- 5 million rubles of losses.

The differences in cropping power, weak seed production operations and the low pedigree status of the livestock -- these and other shortcomings appear as a heavy burden with regard to production costs.

It would seem that firm procurement plans for agricultural products should by now be firmly established in operational practice. But recently various additional tasks have been added to them. A plurality of plans does not promote a rational production organization and in fact it does very little to promote the campaign aimed at improving the production indicators.

Improper use is still being made of monetary funds on many farms. For example, during the Tenth Five-Year Plan the average annual gross output production volume of the kolkhozes and sovkhozes (compared to 1973 prices) increased by 13.9 percent; and the monetary earnings for marketable products -- by 51.9 percent (compared to the Ninth Five-Year Plan). However the growth in production expenses exceeded the average annual increase in marketable output by 19.1 percent and this adversely affected the profitability level of the agricultural enterprises. Compared to the Ninth Five-Year Plan when the total profitability of agricultural production amounted on the average to 17.2 percent, during the Tenth Five-Year Plan -- 14.9 percent (that is, the profitability decreased by 2.3 percent).

Some economists are of the opinion that an increase in the production cost and a reduction in the output-capital ratio constitute a regular process during the period devoted to the re-equipping of agriculture and converting it over to an industrial basis. It is obvious that a sharp intensification in fixed productive capital and the development of new machines and modern means of production are not achieved free of charge. Moreover, the productivity of new machines and equipment is not always as high as their cost would seem to warrant. For example, the K-700, K-701 tractors and the Niva, Kolos and Sibiryak combines are more costly than their predecessors by 2-3 times and yet their productivity is higher by only one and a half to two times. Thus would it not be better (cheaper) to continue on with the old equipment? Certainly not. The new equipment is more trustworthy. The efficiency of use of the machine-tractor pool must be raised and the annual and daily output for one physical and standard tractor increased. Meanwhile the annual and daily output for a tractor throughout the republic, for many years now, has remained at almost the same level -- 950-1,090 conventional standard hectares, whereas on leading farms it amounts to 1,200-1,300 conventional standard hectares.

The low level of tractor use is the result of frequent idle periods caused by a "lack of work," by prolonged repair operations, by the farms not being fully supplied with the required towing implements and also by the low level of skills possessed by the machine operator personnel. Scientific studies have shown that if the existing tractors are equipped with complexes of towed machines and if the farms are supplied with the required numbers of experienced machine operators, then this will make it possible to reduce the republic's tractor requirements by 25-30 percent, reduce the requirements for fuel and lubricating materials by 10-20 percent and lower labor expenditures per hectare of crop rotation area by 1.9 man-hours and, as a result, labor productivity will be raised by a factor of 3.7.

Reserves for increasing output production, with a considerable reduction in production costs, are available in each branch and in each sector, provided the work is carried out in a zealous and thrifty manner. This fact is borne out by the experience of leading collectives.

Why is it that from year to year the Krasnoyarskiy Sovkhoz in Tselinogradskaya Oblast is numbered among the best? The Krasnoyarskiy workers are not hindered by the weather or other objective and subjective factors. During the Tenth Five-Year

Plan, the sovkhos annually produced a gross output of almost 5 million rubles. Moreover, all of the farm's branches (grain, beef, pork, milk) operated at a profit

Table 3

Structure of Expenses Per Ton of Livestock Products

Type of Product	Years	Expenses in rubles, including					
		Wages	Feed	Amortization of fixed capital	Current repair of equipment and facilities	Other direct expenses	General production and general farm expenses
Meat:							
Large-horned cattle	1971-1975	325.4	825.2	91.8	80.6	178.6	151.6
	1976-1980	340	1103	157	103	271	201
Pork	1971-1975	194.3	798.5	77.6	66.7	179.6	96.3
	1976-1980	199	956	130	88	206	126
Sheep and goats	1971-1975	274.6	271.2	41.7	39.8	119.1	102.6
	1976-1980	346	373	78	69	178	139
Poultry	1971-1975	135.6	924.4	110.7	44.8	218	93.4
	1976-1980	85	921	126	48	278	89
Milk	1971-1975	64.7	82.9	136	10.1	24.1	25.7
	1976-1980	68	111	25	14	33	33
Wool	1971-1975	1462	1443.8	221.8	211.8	634.5	546.1
	1976-1980	1842	1986	416	368	949	744

The rates of growth for production which the sovkhos planned for the past five-year period surpassed by 25 percent the average rates for the rayon. The confidence held by the collective that it would be able to cope with the plan was based upon a strong economic foundation. The Krasnoyarskiy workers were some of the first to reorganize the structure of production control and to convert over to the branch principle of control.

The soil-protective system of farming is being introduced into operations on an all-round basis. This has made it possible to raise the average annual cropping power of the grain crops by 3-4 quintals per hectare. One principle is followed: "An individual technology for each field" and this has produced a double gain: raised cropping power and a reduction in production expenditures.

Use is being made out on the fields of ultra-low volume spraying of the crops with herbicides and up to five mechanized tillings of the soil are being carried out each season on the fallow fields.

The Krasnoyarskiy Sovkhos specializes in the production of seed grain and thus great attention is being given here to the post-harvest treatment of the seed: over a period of 24 hours the farm can raise to 1st and 2d class sowing condition

no less than 1,000 tons of seed and without the use of manual labor. This is accomplished by eight grain cleaning units. The funds invested in mechanization are reimbursed rapidly -- for high quality grain of outstanding condition the sovkhos realized considerable profit. Thus the principal portion of the wheat is sold with a bonus of 30-50 percent for its high gluten content. Of the overall volume of profit obtained, only one sixth derives from bonuses for the above-plan sale of grain and the remaining amount -- the result of an improvement in the marketing conditions and reduced production costs.

Literally everything is taken into account at the sovkhos, including the potential of each brigade. For example, some fields require great applications of effort and produce less yields. Based upon this fact, the cropping power and agrotechnical expenditures are planned for a brigade. The expenses for obtaining 1 quintal of grain in different subunits, for example, amount to 5.12 and 4.10 rubles.

The mechanization and electrification department created at the farm ensures a high technical readiness for the machine-tractor pool. Owing to a reduction in repair expenses, the department saved hundreds of thousands of rubles. The machine operators saved 300 grams of fuel per hectare. The production cost for 1 hectare of tractor work turned out to be considerably lower than that planned and the indicator for equipment output -- one of the highest in the oblast.

Considerable resources are being employed for the development of livestock production and the intensification of feed production. A departmental technology is in operation in dairy livestock production. The renovation of the herd is making it possible to obtain pedigree animals which are furnishing more than 3,000 kilograms of milk annually. Today the farm is able to sell pedigree young stock. Each ruble invested in dairy cattle husbandry returns 25-30 kopecks in profit.

And once again it should be emphasized -- the planning tasks for livestock breeders are established depending upon the pedigree qualities of the livestock, the conditions for their maintenance and the level of farm mechanization. Feed consumption is taken into account on a daily basis, with special attention being given to ensuring a balanced ration, preparing forage for feeding to the animals and to seasoning the feed with special additives. As a result, the productivity of the cows is increasing, while at the same time a reduction is taking place in the quantity of concentrates being employed.

A strengthening of the feed base as a result of radical improvements in 7,000 hectares of pasture and haying land has made it possible to raise the productivity of this land by several times. Considerable return is being realized from 700 hectares of irrigated land. All of the silage and haylage procured is being stored in good quality trenches. Three large feed preparation shops have been built on the farm.

The motor vehicle pool has been converted over to a cost accounting basis and the issuing of material incentives to its workers is based upon fulfillment by the sovkhos of its output production plan. Thus it is by no means an accident that the production cost per ton-kilometer is declining: last year it was 20 percent less than that planned. Generally speaking, the amount of material incentives issues to all workers on the farm is directly dependent upon the degree of fulfillment of the output production plan and a reduction in expenditures. For example, the

additional payments and bonuses per ruble of basic wage range from 1.02 to 1.35 rubles according to the brigades involved.

In the experience accumulated at the sovkhos, the most value is attached to the successes achieved in lowering production costs. For example, the production cost for one ton of the principal type of product, compared to the average for the union republics (see Tables 2 and 3), is considerably lower: grain -- by 20 rubles and 30 kopecks, potatoes -- by 25 rubles and 60 kopecks, vegetables -- by 15 rubles and 80 kopecks, beef -- by 638 rubles and 80 kopecks and milk -- by 50 rubles and 40 kopecks.

At the same time, the wages for the potato growers and livestock breeders at the Krasnoyarskiy Sovkhoz have increased, the result of the increase that has taken place in the volume of food products produced by them.

It is interesting to compare the results of the production-economic activities of farms in Tselinogradskiy Rayon and the sovkhos during the Tenth Five-Year Plan. Whereas on 100 hectares of agricultural land the Krasnoyarskiy Sovkhoz produced an annual average of 10,700 rubles of gross output (in comparable prices), the average sovkhos in the rayon produced only 6,800 rubles worth. The output-capital ratio was 69.5 and 33.7 kopecks per ruble respectively. For one man-hour, the Krasnoyarskiy Sovkhoz workers produce 3.7 rubles worth of product and the rayon as a whole -- 2.6. The total amount of profit during 5 years at the sovkhos -- more than 16 million rubles and the average for the rayon's sovkhoses -- 2.7 million rubles.

Within the republic there are many other farms and even individual branches where from year to year reductions are taking place in labor expenditures and in the resources required for output production and where the fixed productive capital is being mastered in a rational manner and utilized efficiently. Thus, on farms of Ptitseprom /Administration of the Poultry Raising Industry/, the output-capital ratio during the 10 year period increased by 55 percent, the production costs for eggs decreased by 37.4 percent and profitability doubled.

The operational experience of the largest sovkhos-technical school in the republic, Pakhtaaral in Chimkentskaya Oblast, also proves that it is possible to achieve a high output-capital ratio when the work is organized in a skilful manner. During the years of the Ninth and Tenth Five-Year Plans, the effectiveness of use of fixed capital at this farm increased twofold compared to that for the Seventh Five-Year Plan.

Kazakhstan has been assigned great and responsible tasks for the Eleventh Five-Year Plan. Decisive importance is being attached to the further intensification of agricultural production, the gross output of which is increasing by 12 percent, including farming output -- by 9.3 percent and livestock production -- by 13.5 percent. A key problem has been and continues to be that of increasing the production of grain to the maximum possible degree. The average annual volumes of grain must be raised to 28.4 million tons and procurements -- to 16.3 million tons. During the five-year plan, an average annual production of meat (in dressed weight) of 1.23 million tons must be achieved, milk -- 5 million tons, eggs -- 3.5 million, wool -- 110,800 tons and karakul pelts -- 2.57 million. For the development of the republic's agroindustrial complex, 17.4 billion rubles worth of capital investments are being made available.

The fulfillment of the assigned tasks requires further improvements in the culture of farming and all-round mechanization and automation of the production processes. Thus a requirement exists for raising the cropping power of the grain fields by 2-3 quintals compared to the average achieved for the republic. In solving the problem of supplying the population with food, special attention must be given to the production of beef. At the present time, it constitutes 43 percent of the republic's overall production of meat. In the future, beef production can be increased by increasing the number of cattle and also through the use of incremental weight increases, that is, supplying the state with large-horned cattle the average weight of which is no less than 400-500 kilograms. On leading farms, this indicator has been raised to 550 kilograms. For example, the average weight of young bulls turned over at the Moskalevskiy Sovkhoz in Kustanayskaya Oblast is 554 kilograms.

The profitability of beef production at the Moskalevskiy Sovkhoz has reached 70-80 percent. The raising and fattening of each young bull involves expenditures of 650-700 rubles and the farm obtains 1,150-1,200 rubles for the sale of one such young bull.

Mutton presently constitutes only 28 percent of the meat balance of Kazakhstan. This indicator can be raised through intensification of the branch. Large reserves for increasing the production of mutton include: delivering quality-standardized lambs during the year of their birth and highly organized fattening of the animals at sites and complexes.

Outstanding indicators are being achieved at the 40 Let Oktyabrya Kolkhoz in Taldy-Kurganskaya Oblast. Here, over the course of a year's time, the Armandostar Komsomol-Youth Brigade fattens 30,000 sheep and turns them over to the state at a live weight of 60 kilograms (average for the republic -- 38 kilograms).

In order to fully satisfy the requirements of the population and also the dairy industry for milk, the number of cows must be increased, breeding work improved and qualitative changes realized in the herd. This will make it possible to raise the milk yield per cow, on the average for the republic, to 2,500-3,000 kilograms.

At the present time, a considerable disproportion exists between the rates of growth in capital investments and the rates of growth in output production. This derives from the fact that the farms do not have at their disposal optimum norms for their fixed productive capital. Thus some farms order and obtain more equipment than is needed for carrying out the work, while others, to the contrary, experience critical equipment shortages.

A decisive condition for raising the efficiency of public production is that of developing scientifically sound plans.

At the present time, a decision has been handed down to establish a common plan for state procurements of agricultural products. In 1981, for the purpose of motivating the farms to increase their production and sale of products to the state, a bonus was introduced in the amount of 50 percent of the procurement prices for products sold to the state over and above the average level achieved during the Tenth Five-Year Plan.

The common plan ensures an acceleration in scientific-technical progress, it intensifies the role played by the intensive factors of development and it improves the balance and validity of planning computations, required for the stable and proportional development of agriculture with minimal expenditures of labor and material-monetary resources.

In the interest of expanding the initiative of the farms, their rights are being expanded in the sphere of production planning, technology and organization.

The practical implementation of these and other measures is inseparably aligned with such economic categories as production cost, profits and profitability, without which it would be impossible to determine the effectiveness of agricultural production. In particular, we are of the opinion that a scientifically sound normative production cost should be developed for the process of expanded reproduction. This will make it possible to describe more completely the level of economic development of the agricultural branches, utilize the fixed productive capital and working capital in a rational manner, determine the quality of production management and ensure growth in labor productivity. A production cost norm will make it possible to establish sound differentiated prices for agricultural products by zones, arrange the production structure and specialization for the agricultural branches in a rational manner and carry out the process of expanded reproduction on a planned basis and in keeping with the latest equipment and technologies.

The introduction of scientifically sound norms not only for production costs but also for profits and profitability will raise the quality and validity of planning computations at all levels of planning. However the normative base for planning the production costs, profits and profitability for agriculture presently consists mainly of norms for the republic as a whole and only partially for its zones. Use of the existing norms, developed by leading scientific-research institutes, is complicated, since planning for the development of agricultural production is presently being carried out by oblasts, rayons and farms.

The task consists of creating a system for scientifically sound normative information at any level of agricultural planning. This is a vital problem which must be solved in the near future.

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AGRO-ECONOMICS AND ORGANIZATION

EXTENT, SIGNIFICANCE OF AGROINDUSTRIAL COMPLEX SYSTEM

Moscow EKONOMICHESKAYA GAZETA in Russian No 25, Jun 82 p 14

/Article by S. Sdobnov, professor and doctor of economic sciences: "Agroindustrial Complex"/

/Text/ Food and other products produced from agricultural raw materials occupy a very important place in the production of material blessings. "The food fund" stated V.I. Lenin, "constitutes the true foundation of the economy" (Volume 42, page 150).

A distinctive feature with regard to solving the food problem under the conditions of developed socialism lies in the fact that an all-round approach is provided for developing agriculture and the totality of all of its associated national economic branches, all of which form the agroindustrial complex.

Formational Prerequisites

The economic and social prerequisites for the formation of the agroindustrial complex were created as a result of the successful carrying out of the party's agrarian policies and the economic development of the country. The kolkhozes and sovkhozes have become large-scale producers and suppliers of commodity grain, technical crops, meat, milk and other agricultural products. On this basis, the procurement-marketing system and enterprises for the storage and processing of products have undergone extensive development.

With each passing year, the powerful multi-branch industry created in this country is expanding the deliveries of logistical resources to agriculture. Industry is capable of providing field crop husbandry and livestock production with the required modern means of production and of carrying out, on a large scale, the processing of agricultural raw materials into finished products for eventual consumption within the trade system.

With the industrialization of agricultural production and the development of specialization, an extensive network of enterprises and organizations has sprung up in the rural areas for supplying the kolkhozes and sovkhozes with material resources, the repair and servicing of equipment, the application of fertilizers, the carrying out of land reclamation work, construction, transport operations and the storing and processing of products.

The intensification in the social division of labor has led in recent years to the establishment of independent branches of machine-building for livestock and feed production, rural construction and for the mixed feed and microbiological industry. A single agrochemical service has been created for the country as a whole. The range of work being carried out by enterprises and organizations engaged in providing production and technical support for the kolkhozes and sovkhoses is constantly being expanded.

The development of inter-farm cooperation and the creation of agroindustrial enterprises and associations has also expanded considerably the production and economic relationships between agriculture and other branches of the national economy and it has brought to light new forms for these relationships.

During the course of developing the productive forces, as a result of the increasing intensification of social division of labor, specialization and concentration of agricultural production, inter-farm cooperation and agroindustrial integration, the process of the formation around agriculture of a complex of closely interrelated branches is taking place in an active manner. Some of these branches are supplying agriculture with logistical resources and processing the output of farming and livestock production, while others have a production and socio-domestic infrastructure.

Interrelationships of Teams

The objective nature of the formation of the agroindustrial complex is convincingly borne out by the following data.

The proportion of agricultural output being supplied to industry in the form of raw materials increased from 39.6 percent in 1959 to 52.4 percent in 1972 and to 60.2 percent in 1980.

Agricultural output is being utilized by more than 80 branches of the national economy. A considerable increase has taken place in the number of branches of the economy, the output of which is being delivered to agriculture. Compared to 1959 when there were 28 such branches, today there are more than 90.

Industry is supplying the sovkhoses, kolkhozes and other agricultural enterprises with roughly 70 percent of the entire volume of tractors being produced, more than 29 percent of the trucks, 96 percent of the combines, 80 percent of the mineral fertilizers and almost the entire production of chemical plant protection agents.

A sharp increase has taken place in the volume of deliveries of construction materials, construction equipment, electrical equipment, fuel and other industrial means of production. As a result, more than 80 percent of the fixed productive capital of agriculture now has an industrial origin and in the material expenditures for the production of agricultural products 60 percent is consumed by industrial labor.

Hence the production of food products is now determined to a tremendous degree not only by agriculture but also by many other branches of the economy.

Based upon a thorough analysis and comprehensive summarization of the processes taking place in the economic and social development of the country, the party,

during the 16th Congress and the May (1982) Plenum of the CC CPSU, drew an important theoretical conclusion regarding the increasing importance in solving the food problem of the country's agroindustrial complex and also concerning the need for singling it out as an independent object for planning and control.

Such a decision was dictated by life itself and it was conditioned by the need for raising the rates of growth for agricultural production, increasing the return from the funds invested here, conserving the products and delivering them to the consumer in a high quality state. This is particularly important in view of the fact that in recent years bottlenecks, shortcomings and definite disparities have appeared in the structural subunits of the agroindustrial complex and this has had an effect on the results of the economic activities of kolkhozes, sovkhoses and other agricultural enterprises.

The food program adopted by the Plenum of the CC CPSU for the period up to 1990 embodies a special purpose and all-round approach to solving the tasks for increasing the production of food products. "A most important feature of such an approach" commented L.I. Brezhnev, "is the need for coordinating and combining the work of agriculture itself and its service branches of industry, transport and trade and subordinating all of their activities to the common final goal -- that of producing high quality food products and making them available to the consumer."

The May (1982) Plenum of the CC CPSU adopted a decision of basic importance -- the formation both in the center and in the various areas of common organs for controlling the agroindustrial complex. Special importance is attached to the rayon level. The plans call for each rayon to have an agroindustrial association as a fully competent and democratic organ of control, fully capable of influencing production while taking into account the interests of both the kolkhozes and sovkhoses.

Structure of the APK [agroindustrial complex]

In essence, an agroindustrial complex is a single integral production-economic system which encompasses a number of national economic branches that specialize in the production of farming and livestock products, in the processing of these products into finished goods and their sale and also in the production of the means of production for agriculture and its related branches engaged in providing logistical services for agriculture.

All of the structural subunits of the agroindustrial complex are reflected in the food program: the prospects for their development during the eleventh and twelfth five-year plans have been defined.

Taking into account the inter-branch relationships in this complex and the specific requirements of a technological, economic and social nature, the following spheres of the agroindustrial complex can be singled out.

The production of the means of production for the APK branches. This includes tractor and agricultural machine-building, machine-building for livestock and feed production and for the light and food industry, the production of mineral fertilizers and other chemical means and the mixed feed and microbiological industry.

Direct agricultural production, the branches of field crop husbandry and livestock production and also fishing and forestry.

Enterprises and organizations which ensure the storage and processing of agricultural raw materials. This includes the food, meat and dairy and milling-groats industry, the light industry which engages in the primary processing of agricultural raw materials, the procurement system and the elevator-storehouse economy. Organizations associated with the sale of the products.

The agroindustrial complex also includes enterprises and organizations for land reclamation and water management, production-technical support, agrochemical service, construction, transport and some others.

The agroindustrial complex is involved in the process of active formation and organizational strengthening. Thus, such a structure cannot be considered as finally developed; it could still have other structural subunits.

An important feature of the agroindustrial complex lies in the fact that, as an integral production-economic system, it can be viewed from the standpoint of individual republics, krais and oblasts. Here we have in mind regional agroindustrial complexes. The formation of such complexes takes place taking into account local conditions and peculiarities.

When discussing the agroindustrial complex, one other aspect should be borne in mind. In recent years, we have witnessed the creation of agroindustrial enterprises and associations in which agricultural production cooperates directly with industrial production based upon specialization and concentration. These enterprises and associations appear as production-economic complexes in which the production and processing of agricultural products are carried out in a single technological flow line. The country numbers more than 600 agroindustrial enterprises and more than 150 agroindustrial associations. Sub-branch and branch agroindustrial associations are also forming, for example, in the sphere of industrial poultry raising, viniculture and other branches.

Scales and Importance

The following data furnishes some idea as to the scales and national economic importance of the agroindustrial complex: the final products of the APK, for which agricultural materials serve as the source, constitute almost 75 percent of the retail commodity turnover of state and cooperative trade, including food goods -- more than 50 percent.

Thirty seven percent of the country's fixed productive capital is concentrated in the agroindustrial complex, it includes more than 40 percent of all workers in the national economy and it creates 42 percent of the national income. It is the most important national economic system of our country and it plays a tremendous role in the economic and social development of our Soviet society.

In the structure of the agroindustrial complex, an important place is occupied by the production of food products. Such products constitute 74-76 percent of its gross output.

Thus the principal task of the agroindustrial complex is that of first of all increasing the production of food products.

It is emphasized in the food program that the country's population must be supplied with a stable supply of all types of food goods as rapidly as possible and that substantial improvements must be achieved in the food structure for the Soviet people through the use of more valuable products.

The conclusion drawn during the 26th party congress and the May (1982) Plenum of the CC CPSU regarding the chief and leading element of the agroindustrial complex is of fundamental importance. This element is agriculture, since it is here that the foundation for the food fund is created. More than one half of all workers attached to the agroindustrial complex work in agriculture.

The food program places emphasis on the decisive role being played by the kolkhozes and sovkhoses in the development of agricultural production. At the same time, importance is also being attached to the work being performed by the subsidiary farms of enterprises, the private plots of the population and by horticultural cooperatives in solving the food program. The program defines the high goals to be achieved in connection with the production of agricultural products.

Measures have been undertaken to improve control over the agroindustrial complex, to improve the economic mechanism, to improve the personnel situation at kolkhozes and sovkhoses and to improve their economies and also the housing, municipal-domestic and socio-cultural living conditions of the rural population. These measures are creating the prerequisites required for the successful carrying out of the tasks set forth in the food program.

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AGRO-ECONOMICS AND ORGANIZATION

FUNCTIONS OF LATVIAN EXPERIMENTAL RAPO EXPLAINED

Moscow EKONOMICHESKAYA GAZETA in Russian No 24, Jun 82 p 6

/Article by V. Kleynberg, chairman of the administration of the Talsy RAPO and deputy to the Latvian SSR Supreme Soviet: "From an Experiment To Operational Practice"/

/Text By way of an experiment, a RAPO /rayonnoye agropromyshlennoye ob'yedineniye; rayon agroindustrial association/ was created in our rayon. It unites kolkhozes, sovkhoses and also those enterprises and organizations which provide services for agricultural production.

This basically new form of control requires the test of time. In it one detects the thoughtful approach employed by the party for reorganizing the existing and long obsolete forms for agricultural administration. I recall the year 1973. The Institute of Economics of the Latvian SSR Academy of Sciences, in accordance with a task assigned by the Central Committee of the Communist Party of Latvia and the republic's Council of Ministers, developed a model for a rayon agroindustrial association and also a plan for specialization, concentration and inter-farm cooperation. Such an organizational form has been developed in our Talsinskiy Rayon.

Following the completion of preparatory work and the adoption of a temporary statute, a rayon agricultural association was initially created and then slightly less than a year and a half later, based upon accumulated experience -- a rayon agroindustrial association. The production of the principal types of products increased noticeably during the years of work under the new system. This is borne out by the results of the Tenth and the first year of the Eleventh Five-Year Plans.

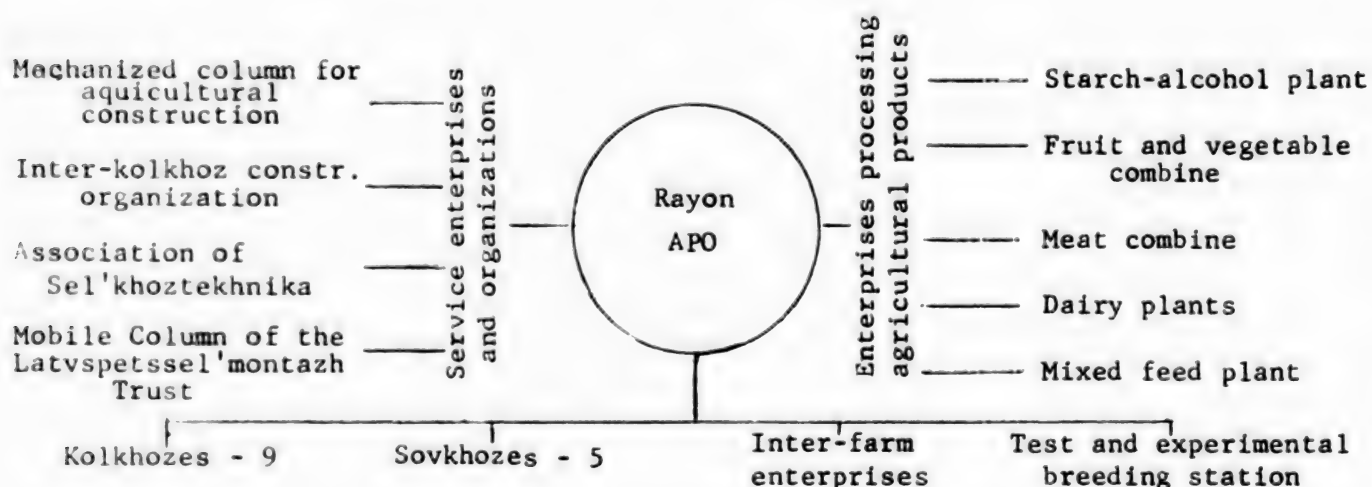
Thus, in 1981, on 100 hectares of agricultural land, 158 quintals of meat and 577 quintals of milk were produced and their production, on the average for the republic, amounted to 142 and 478 quintals respectively. In the process, it should be noted that our rayon is a typical one for the republic and receives the same logistical support per unit of space as do the other rayons. In the future, as the plan for specialization and concentration based upon inter-farm cooperation becomes further developed, the economic effectiveness of agricultural production will increase noticeably throughout RAPO on the whole.

Today, with the decision having been made to create rayon agroindustrial associations throughout the country, our colleagues must carry out an appropriate reorganization

based upon the clear and thorough reasoning set forth in the statutes and conclusions found in the report by Leonid Il'ich Brezhnev and in the decisions handed down during the Plenum concerning the food program and the methods for carrying it out.

Structure of the Association

Exactly just what does our agroindustrial association look like today? Its structure is shown in the diagram provided on this page. The enterprises and organizations included within RAPO have retained their economic independence and legal rights



All of the activities of the association are based upon cost accounting principles. In order to ensure proportional development for all branches of the APK, the association's council is creating centralized funds -- for strengthening and expanding production, for socio-cultural measures and housing construction, for material incentives and a reserve fund; it is establishing the size of the funds and the method for making withdrawals and for using them. All problems concerned with specialization and concentration of agricultural production, services for agriculture and the processing of agricultural products are being solved jointly by all of the farms and RAPO organizations, regardless of their departmental subordination.

Accounting prices are being employed in the association for products of inter-farm exchange and price-rates for mutual services and use is also being made of a system for the formation of centralized funds for the construction of projects of an inter-farm nature.

Allow me to cite some economic-administrative functions of our RAPO, such as the centralization and use of funds, the regulation of inter-farm relationships, the development and implementation of measures for leveling off the economic conditions of management, the creation of specialized enterprises and services, the use of scientific and planning organizations for solving organizational and technological problems of the association, personnel training and the introduction and stimulation of scientific-technical progress and leading experience.

The association is headed by a collective elected organ -- the association's council. It elects the administration, which has executive-administrative functions.

The tasks of the single engineering service of the RAPO are carried out by the engineering-technical personnel of the inter-farm enterprise for the mechanization and electrification of agricultural production.

Economic Services

Under the conditions of the association, which operates as a single complex for the production and processing of agricultural products, a considerable increase has taken place in the role played by the planning-economic and financial department. In particular, it directs the development of draft plans for selling agricultural products and raw materials to the state, future plans for socio-economic development and all-round plans for specialization, concentration and cooperation.

The economists and financial experts, jointly with other services of the association and specialists, are developing accounting prices, rates and other economic norms for regulating inter-farm relationships, a method for forming the centralized funds of the association, they are establishing the criteria for evaluating and stimulating economic activity and measures for strengthening the economy and raising the efficiency of the association's enterprises.

Our experience reveals that in the RAPO more efficient use is made of the internal reserves of each farm for the production of agricultural products by means of intensified specialization and inter-farm cooperation. The new administrative organization makes it possible to introduce more rapidly the achievements of scientific-technical progress, to convert agricultural production over to an industrial basis, to utilize capital investments in a more rational manner for the construction of production installations of optimum dimensions, to integrate gradually and establish closer organizational-economic links between agriculture and the sphere of agricultural services, to develop the socio-economic processes in a planned manner and to bring the state and cooperative forms of ownership closer together.

For example, let us take a look at one key task -- that of grain production. All of the association's farms participate in this work. The plans call for the grain crops to be increased to 52 percent of the sowing structure. However, not all of the farms are producing commodity grain. Three of them specialize in seed production, including the Kolkhoz imeni Lenin. A highly productive complex has already been erected here, where the seed is raised to 1st class, stored, treated with chemicals and then delivered to neighboring farms.

Based Upon Specialization

Last year the Kolkhoz imeni Lenin sold 800 tons of seed and subsequently the volume of seed sales will increase to 2,500 tons. In the process, other farms maintain accounts with it not on the basis of the state procurement price, but according to the lower accounting price. Thus the high profitability of seed production is being lowered intentionally so as to raise the production profitability of commodity grain. Such an approach makes it possible to raise the profitability of other branches considered to be unprofitable and to achieve balanced development for them.

Such specialization has been carried out in other branches. An analysis of the economic activity of the association reveals that the principal growth in livestock and field crop husbandry output is taking place mainly at the specialized farms.

It bears mentioning that with the very first days of existence of the RAPO and parallel with farm specialization, improvements were carried out with regard to strengthening the logistical base of the processing enterprises and procurement organizations and this was of assistance in decreasing and eliminating output losses. Closer production-economic relationships are being established between the kolkhozes and sovkhoses with the organizations providing services for agriculture and those enterprises which process the agricultural products.

Thus, based upon a number of services of the rayon association of Sel'khoztekhnika and also kolkhozes and sovkhoses in the rayon, an inter-farm enterprise has been created for mechanization and electrification which is subordinate directly to the association. Plans have been prepared for developing the logistical base of a mechanized column for land reclamation and aquicultural construction and an inter-kolkhoz construction organization.

The labor collectives of the Talsiny RAPO have undertaken high socialist obligations for 1982. In particular, the plans call for grain production to be increased by 56 percent above the figure for last year, milk -- by 8 percent and meat -- by 24 percent. Much has been accomplished towards achieving these goals: the livestock wintering program was completed successfully, the pasture period has commenced in an organized manner, the sowing work was carried out on a rapid basis and the farms have commenced their feed procurement operations.

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STRENGTHENING OF BELORUSSIAN SUBSIDIARY ENTERPRISES REQUIRED

Minsk SEL'SKOYE KHOZYAYSTVO BELORUSSII in Russian No 5, May 82 p 40

/Article by P.N. Lyshchitskiy, deputy chief of the Central Statistical Administration for the Belorussian SSR: "Advantages of a Subsidiary Farm"/

/Text/ During the 26th CPSU Congress, emphasis was placed upon the fact that the subsidiary farms of state and cooperative enterprises and organizations must be provided with maximum assistance and support. They can and must become a very important aid for increasing the production of milk, meat, vegetables and fruit and for supplying plant dining halls and other public catering enterprises with fresh food products. As yet, the requirements of city-dwellers for vegetables, fresh fish, honey, fruit, berries and certain meat products are still not being satisfied fully. The output of the agricultural departments of enterprises and organizations is helping to compensate for the shortages in these products and it is becoming an additional source for increasing the variety of food goods.

This is why a maximum amount of effort is being directed towards creating subsidiary farms at each state and cooperative enterprise. For the purpose of solving the problem of a logistical base for these farms, the decision has been made to make use of the internal resources of metal, wood, construction materials and also credit. For example, industrial enterprises, organizations and institutes can obtain credits for a period of up to 6 years, over and above the volumes of state capital investments, provided the expenditures are reimbursed within the established period. The construction of agricultural installations is financed by means of state capital investments.

The construction of agricultural departments is a profitable undertaking. They make it possible to utilize to a maximum degree the waste products of public catering enterprises of the meat and dairy, fishing, food and microbiological industries, sanatoriums, holiday homes, rural schools and professional-technical institutes. Through these departments the industrial enterprises are able to utilize considerably more effectively their secondary heat resources and available transport. Exhaust vapors and hot water serve as sources for heating the hothouses and livestock facilities.

The possibility also exists of attracting additional labor resources. As a rule, pensioners and school children work on the subsidiary farms, that is, those individuals who are unable to work full time in the principal production operation. At a number of enterprises, work on a farm or in a garden is skilfully combined with

improving the health of workers, providing them with active relaxation and filling out their leisure hours. Special importance is attached to ensuring that this work serves to accustom the people, particularly juveniles, to performing work. In addition, it should instill in them a love for their native land.

Taking into account these advantages, many ministries and departments throughout the republic undertook to organize subordinate farms at subordinate enterprises and organizations. In 1981 alone, their number increased by 12 percent and this year there are now 1,207 such farms. During the year the number of hogs increased by 29 percent and large-horned cattle by 18 percent. This made it possible, for the republic on the whole, to produce 13,200 tons of livestock and poultry meat on the subsidiary farms, or 71 percent more than in 1980, and also 14,000 tons of milk.

Of the overall gross output volume of farming and livestock production being produced in the public sector throughout the republic, the output by the agricultural departments still constitutes only approximately one percent. However, its value lies in the fact that it is delivered directly to the dining tables at any time of year, regardless of the weather or other conditions, and at comparatively low prices.

During the year, the number of farms having productive livestock and belonging to organizations of the Ministry of Trade for the Belorussian SSR increased twofold and in Belkoopsoyuz /Cooperative Union of the Belorussian SSR/ -- an increase of 31 percent. Moreover, whereas earlier the subsidiary farms were created only for obshchepit /public eating establishments/, today they are being created subordinate to trade enterprises. The organizations of consumer cooperation are selling almost one half of the meat produced. The enterprises of the Ministry of Public Health, Ministry of Education, the Fishing Administration and others are actively engaged in creating their own agricultural departments.

On the livestock farms of the Shinnik enterprise of the Bobruyskshina Association, more than 1,000 head of large-horned cattle, 680 hogs and 47 horses are being maintained. Last year, 2 kilograms of meat and 30 kilograms of milk were sold per worker. The farms are being fully supplied with feed that is grown on an area in excess of 1,000 hectares. This is not the best land but its fertility is being improved owing to the diligence being displayed by the workers.

A fine production base has been established on the Lucheskoye subsidiary farm of the Monolit Association. It has at its disposal 1,360 hectares of agricultural land and almost 1,000 hectares of arable land. This makes it possible to fatten many large-horned cattle and to maintain 170 cows. Last year, 167 quintals of meat and more than 4,000 quintals of milk were produced here. The farm is operated by 106 permanent workers. The fattening of the livestock and milk production are carried out using internally produced feed. Of the overall quantity of feed used, only 6.4 percent is purchased.

Nevertheless, individual ministries and departments are not taking full advantage of their potential for creating new subsidiary farms, for increasing their numbers of livestock and poultry or for expanding their sowings of vegetables on sheltered ground. Within the Ministry of Light Industry for the Belorussian SSR, only two farms are maintaining productive livestock, in the Ministry of the Meat and Dairy Industry -- 4 and the Ministry of Forestry -- 5. Only three subsidiary agricultural

enterprises have been created within the Ministry of Procurements for the Belorussian SSR and they are maintaining only 5 head of large-horned cattle and 47 hogs.

Meanwhile the opportunities for maintaining and especially feeding livestock at subordinate enterprises of these ministries are rather great, if only because of the great amount of waste products to be obtained from industrial processing. For example, in 1981 enterprises of the alcohol industry expended only 550 tons of malt residue, brewing waste and so forth for the maintenance of livestock on the subsidiary farms and this constituted only 0.4 percent of the amount that was available.

Last year the waste products from the baking, groats and milling industry amounted to approximately 76,000 tons. Only a negligible proportion of these waste products was used for feeding to animals on subsidiary farms. True, a considerable portion is sold to the kolkhozes and sovkhoses. For the fattening of large-horned cattle and hogs, no use is being made whatsoever of potato pulp, fish waste products, husks, beet pulp or flour dust.

At times, one overhears the statement being made that subsidiary farms create many problems for the leaders and are unable to compete against the farms of Minsel'khoz /Ministry of Agriculture/. This is all quite true. However, a shortage of individual types of agricultural products is still being experienced; the agricultural department must be developed and utilized more completely.

Difficulties and unresolved problems are still being encountered in connection with the creation of new and expanding the production of old subsidiary farms. These problems are primarily associated with acquiring feed and animals and the construction of livestock maintenance facilities. The allocation of mixed feed and funds for tractors, combines and agricultural machines for these farms is not being planned in all areas. Thus it becomes necessary to obtain assistance from neighboring kolkhozes and sovkhoses in almost all areas. The livestock facilities are also acquired from them. In some areas, use is made of food products (groats, flour and so forth) purchased at stores for feeding to the animals. All of this seriously inhibits the work of the agricultural departments. The solution here could be the presentation to the enterprises and organizations of land tracts for the growing of feed and also the gathering up and complete utilization of food scraps.

Difficulties are being encountered in connection with selling the products produced. It is fine if one's own ORS /department of workers' supply/ or dining hall is located nearby. But suppose these facilities are not located nearby and the products appear irregularly throughout the year. What happens in such a situation? If the output produced is not used on the spot, it must be sold to the procurement organizations. Here we have in mind the sale of milk, eggs, livestock and poultry.

Life has borne out the advantages offered by subsidiary farms. This is why the initiative displayed by collectives in wanting to create and strengthen them must receive maximum support from the party and professional trade union organizations.

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